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THE JOURNAL
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*AN ANALYTICAL RECORD OF CURRENT LITERATURE RELATING TO
THE THROAT, NOSE, AND EAR.*

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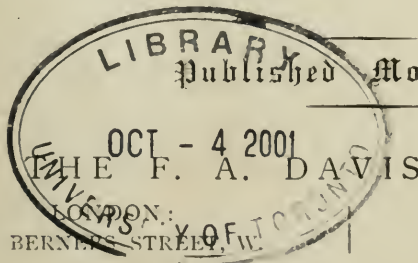
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LARYNGEAL AFFECTIONS (LUPUS AND
TUBERCULOSIS) TREATED BY
KOCH'S METHOD.

By Dr. MICHAEL (Hamburg).

THE great discovery of Robert Koch is already well known to all readers of this Journal from the numerous publications which have appeared in the daily and medical journals. It is, therefore, not necessary to dwell on the great importance of the new treatment so far as laryngology is concerned; it is now time to collect as completely as possible the experiences of different observers upon the efficacy, the dangers, and the limits of the new treatment. Only by experiments can be answered those important questions which concern laryngology, and are the most interesting for the moment. These are:—(1) Can a certain diagnosis be made by the medicament? (2) Is the new treatment a true specific for laryngeal phthisis and lupus? (3) Must it be combined for this purpose with a local treatment? (4) Is the swelling produced by the local reaction so great that tracheotomy often or ever is called for? Having had occasion to observe just lately nearly thirty cases treated by the method, I would answer these questions in the following manner:—(1) Laryngeal tuberculosis and lupus laryngis in all cases are influenced by the lymph in a similar manner, which remains inefficacious in other diseases, so that a certain

diagnosis can be made from the local and general reaction. (2) It may be said, though with the greatest reserve and scepticism, that the treatment has an influence on the local state, and that this influence is a favourable one. It is not yet time to say if a complete and durable cure can be obtained. (3) The limits of the power and effect of the method are not yet known; it is, therefore, not yet the time to combine with it any local treatment. (4) In spite of great degrees of swelling, in the majority of the cases (in all which I saw myself) no stenosis has arisen during the period of reaction, nor has any existing stenosis been increased. I have formed the impression that the direction of the swelling of the tissue is a vertical one. In some cases it was possible to see during the reaction period more of the larynx than before. It will not, therefore, usually be necessary to perform tracheotomy, but it will be judicious to place the patients under medical observation, and to have all prepared for operation in case of unfortunate exceptions.

Having so answered these queries *seriatim* (as to which I cannot warrant that my opinion will be the same in some months), I will give a report of the cases up to now published in Germany, and the views of the Berlin laryngologists, and will close with a relation of my own cases observed in connection with the directing physicians, Drs. Alsberg and Korach, at the Jewish Hospital in Hamburg. I will not give detailed reports on the temperature. In nearly all cases this was elevated from one to three degrees. Only the cases without general reaction will be specially mentioned, because any relation between the degree of the local to the general reaction could not be ascertained. From the medical clinic of Prof. Gerhardt, the assistant, Dr. HERTEL, describes eighteen cases of laryngeal tuberculosis.¹ (1) A patient, eighteen years old, with lupus of the skin. Nothing pathological in the larynx and lungs. During the reaction a red place appeared on the first tracheal ring under the anterior commissure. This place was the next day covered with a greenish mass, the mucous membrane being succulent, and on the right arytenoid cartilage a rough spot. (2) A patient, fifty years old, with tuberculosis of the lungs and healthy larynx, showed after the injection of 0·002 a lenticular ulcer on the third tracheal ring. (3) A seamstress with tuberculosis of the lungs. On the posterior wall of the larynx a large ulcer. After two injections of 0·002 and 0·005, swelling and hyperæmia of the posterior wall occurred. (4) A patient, forty-two years old, with tuberculosis of the lungs and infiltration of the posterior wall of the larynx. After two injections of 0·002 and 0·005 increase of the swelling followed. (5) A patient, nineteen years old, with tuberculosis of the lungs and infiltration of the posterior wall of the larynx. After injection of 0·002 and 0·005 the elevated place was pointed, and granulation of the left arytenoid was seen, with commencing ulceration. (6) A seamstress, thirty-six years old, with tuberculosis of the lungs, and an ulcer of the posterior wall. After one injection of 0·002 an ulcer was seen on the right arytenoid process. (7) A patient, forty-one years old, emaciated, for a year had

difficulty of swallowing. The examination showed great swelling and redness of the tonsils and soft palate, with numerous yellow spots. The laryngeal mucous membrane was also swollen. Swelling of the glands. Nothing in the lungs, and no tubercle bacilli were found. Excessive secretion. After probatory injection of 0'002, increase of all symptoms followed; the spots changed into confluent ulcers and increase in size of the glands occurred. After a second injection progress of the ulceration was seen, with diminution of the swelling. (8) A patient, forty-seven years old, with tuberculosis of the lungs, stridor, infiltration of the epiglottis and the false bands, and ulceration of the vocal bands. After injection of 0'001 increase of the swelling and hyperæmia followed. (9) A patient, twenty-four years old, with tuberculosis of the lungs and ulcer of the left arytenoid cartilage. Decrease of the swelling after injection. (10) A patient, forty-five years old, with tubercle of the lungs; near the right arytenoid process an ulcer of the size of a lentil; swelling of the ventricular bands. After three injections of 0'002, 0'003, 0'005, two granulations on the epiglottis, increase of the swelling, and new ulcers appeared. (11) A patient, twenty-nine years old, with tubercle of the lungs, and enormous infiltration of the epiglottis. After injection of 0'002 increase of the swelling of the epiglottis. It was covered with numerous little ulcers, and there was œdema of the arytenoid cartilages. (12) A patient, twenty-five years old, with tubercle of the lungs; redness of both vocal bands, the left not moving. After three injections of 0'002, 0'003, 0'005, spots appeared on the arytenoid processes, covered with greenish-white masses. (13) A patient, thirty-eight years old, with tubercle of the lungs. Redness of the right vocal band, and infiltration of the right arytenoid cartilage. After two injections of 0'002, numerous little ulcers appeared on the free edge of the epiglottis, and an ulcer on the left arytenoid process, with swelling of the right arytenoid cartilage. (14) A patient, twenty-six years old, with tubercle of the lungs. Swelling of the inter-arytenoid fold, and vocal bands greyish white. After two injections of 0'002 and 0'005 a greyish-white membrane covered the arytenoid cartilages. (15) A patient, thirty-one years old, with tuberculosis of the lungs and swelling of the arytenoid fold. After three injections of 0'002, 0'002, 0'005, both vocal bands were red and swollen. (16) A patient, twenty-one years old, with tubercle of the lungs, and swelling of the right vocal band. After two injections of 0'002, hoarseness occurred, and ulcers formed on the right vocal band, with swelling of the epiglottis. (17 and 18) In both cases no reaction occurred, and there was no change in the condition of the larynx. After the injections the author concludes that in the majority of his cases the diseased parts become swollen, and a destruction of the infected tissue follows. The time has as yet been too short to expect a real cure.

Drs. LUBLINSKI and GRABOWER reported on the cases observed in the clinic of Dr. William Levy (Berliner Laryngologischer Gesellschaft, at the meetings of November 21 and December 5).

Dr. LUBLINSKI reported upon the general reaction, which resembles that in cases of external and pulmonary tuberculosis. With regard to

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the local reaction, he had observed no dangerous symptoms. In those cases, also, in which stenosis already existed before the treatment this was not increased so as to render tracheotomy necessary. In all cases a favourable influence was observed upon the local state, but up to now no one has been cured. In one case of infiltration of the posterior laryngeal wall during the reaction occurred great swelling, but the state is now much improved. In a case of infiltration of the epiglottis, and the ventricular bands and perichondritis, the treatment has diminished the difficulty of swallowing. In a case of ulceration, the ulcers were cleansed, as if it had been done by curettement; necrotic parts were also removed. In a case where the differential diagnosis between syphilis and lupus was difficult, the existence of lupus was proved by the injection. The largest dose to begin should be 0·001, because the reaction may sometimes be very great, as was observed in a case of lupus. In regions, also, where ulcers had not before existed, these arose if there was tuberculous infiltration.

Dr. GRABOWER reported (1) the history of a lady, thirty-one years old, with broad infiltration of the posterior wall. After two injections the swollen part had only the fourth part of its former circumference. The author believes that if only the laryngeal affection exists larger doses can be applied; but in cases combined with swelling of the glands the reaction is stronger, and therefore the doses must be small. (2) A patient, thirty-one years of age, with tubercle of the lungs, swelling of the whole mucous membrane, and numerous ulcers. After nine injections the swelling was much decreased, the ulcers were cleansed and the vocal bands could now be seen; a continuous improvement was observed. The third case was that of a girl, fourteen years old, with lupus of the soft palate, the pharynx, the naso-pharynx, and the whole mucous membrane of the larynx. All parts were covered with granulations, and no cicatricial processes could be found. The left vocal band was blurred. The mucous membrane of the nose was also nearly totally affected by the disease. After three injections of 1 milligramme, followed by great reaction, the swelling of the glands decreased, the lupous tissue became necrotic and was removed. The removed parts, microscopically examined, showed giant cells and very many round cells.

Prof. B. FRAENKEL has treated seven patients. They had all been previously treated locally; two having been curetted, one treated with lactic acid, and one with pyoktanin. In one case there arose on the posterior wall a tumour of the size of a bean during the reaction, looking like a papilloma. The swelling disappeared and the larynx looked better than before. The author recommends intubation for those cases in which the swelling becomes dangerous. In those cases, also, which seem to be cured by curettement, the presence of tuberculous tissue was proved by the injection. The author says that the medicament is a specific, and that Robert Koch has delivered us from laryngeal phthisis. By the courtesy of Drs. Levy, Lublinski, Grabower, and B. Fraenkel, I had occasion to accurately observe these cases for some days, and to confirm their observations.

I am also very greatly obliged to Geheimrath von Bergmann and his

assistant, Dr. Schimmelbusch, who allowed me to observe their cases minutely, and take copies of them. Four cases are described in the report of Von Bergmann's clinic.¹ (1) A patient, twenty-eight years old, with tubercle of the lungs, inter-arytenoid infiltration and ulceration. After the injection of 0·01 the larynx was swollen and red, as in an acute inflammation. (2) A patient, forty-two years old, with tubercle of the lungs, ulceration of the vocal bands, and of the left ventricular band. After an injection of 0·005 redness and swelling of the vocal bands occurred. (3) A patient, twenty-seven years old, with tubercle of the lungs, stenosis of the larynx, with stridor, and sub-mucous infiltration of the larynx. Diffuse swelling of the glottis, and the plicæ ary-epiglotticæ. An injection of 0·005 caused increased swelling of the epiglottis. In this case, in spite of the increased swelling during the reaction, the stenosis did not increase, and it was possible to see more of the vocal bands than before. (4) This case, of a patient thirty-one years old, is of great interest. The patient, formerly seen by Dr. Tobold, had a large neoplasm on the deeper portion of the laryngeal aspect of the epiglottis. As the neoplasm, which gave the impression of being a lipoma, was broad-based, it was to be removed by laryngotomy. After an injection of 0·002 the tumour was entirely coughed out during the following night, and the microscopical examination showed it to be of a tubercular nature, also the other portions of the larynx could now be seen, and ulcers could be observed upon the vocal bands. (5) This case was a cancer of the larynx, but as cancer so frequently resembles a tubercular tumour, a probatory injection of 0·01 was applied. This was followed by neither general nor local reaction. A description and illustration of these cases has been published by Dr. Grünwald.² Prof. O. Frantzel³ remarks, concerning laryngeal phthisis, in the Gesellschaft der Charitéärzte, 27th November, that he has confirmed Lublinski and Hartel's observations. He applies only small doses at the commencement, 0·005, 0·001, because the swelling may be so great as to necessitate tracheotomy. Prof. Krause has observed fourteen cases.⁴ He has observed the effect of the medicament to be, without doubt, favourable in the space of two-and-a-half weeks, but up to now without complete cure. In nearly all cases he saw redness and swelling of the diseased parts, and sometimes small hæmorrhages, followed by local necrosis and exfoliation of the diseased tissues; sometimes during the reaction tumours suddenly arose, and if they disappeared, commencing cicatrization and cure often followed. The patient often complains of local symptoms, such as dryness in the throat, and of pains, often in places where no affection can be seen. Dangerous swelling he has only observed in one case. Krause does not believe that in advanced cases cure will be obtained, but in such cases the treatment must also be tried. Similarly, it will be necessary to combine with the medicament local surgical treatment, but not before the limits of its efficacy are known. In one case of a young lady, with great destructions in the larynx, and much pain, and difficulty of swallowing, and very

¹ "Deutsche Med. Woch.," 1890, No. 47.

² "Munchener Med. Woch.," 1890, No. 98. ³ "Deutsche Medicinalzeitung," 1890, No. 98.

⁴ "Berlin Klin. Woch.," 1890, No. 49.

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profuse secretion, great improvement has already been obtained by curettement and lactic acid. The author then made some injections. The secretion disappeared nearly completely, and the swelling diminished. But during the continuation of the treatment new infiltrations arose, and new ulcers spread to the epiglottis and the ligamenta ary-epiglotticæ, so that the condition of the larynx has deteriorated. Such cases must be combined with surgical treatment.

Better results were obtained in the case of a young man with a large ulcer on the posterior wall. The condition much improved after a necrotic exfoliation of tubercular masses. In a case of a large thick infiltration of both vocal bands without affection of the mucous membrane the vocal bands became ulcerated after the injections, necrotic portions were exfoliated, and it seems as if the cicatrization would now commence. It is possible that improvement is not always obtained by exfoliation, but by absorption of the infiltrations. In a case of infiltration of the right vocal band (already previously treated by curettement) and sub-glottic infiltration a commencing retrogression of the infiltration has been observed. In another case the injections were followed by small hæmorrhages in the circumference of the diseased parts, combined with hæmoptysis of the lungs. In a man with extensive infiltration of both ligamenta ary-epiglotticæ, already treated by curettement, a piece of the size of a cherry-stone observed to be floating in the morning was exfoliated in the evening, and some days later was followed by a second exfoliation.

Prof. OPPENHEIMER,¹ in Heidelberg, has observed the exfoliation of an isolated tubercular tumour of the right vocal band by a single injection. The case must be looked upon as cured.

SCHNITZLER² has tried the method in twenty-five cases of laryngeal tuberculosis, and has observed that the general symptoms of reaction are the same as in other cases of tuberculosis, viz., high fever, depression, etc. In the larynx, some hours after the injection, occurred redness and swelling of the infiltrated parts. When the reaction is passed he observed not only the disappearance of reactionary swelling, but the former infiltration also diminished, the ulcers became smaller, and in a few days an inclination towards cicatrization commenced. In cases of intense reaction œdematous swelling of the laryngeal mucous membrane is often observed, and the necrosis of the infiltrated tissue can often be seen. The infected parts often give the impression of treatment by curettement. The favourable influence of the medicament on the laryngeal affection is certain—improvement is often observed, but the observation has been too short to obtain cure. The medicament must be applied only in small doses, so that the local and general reaction will not give rise to dangerous symptoms.

OTTOMAR ROSENBACH³ has reported thirty-five cases observed by him, including some cases of laryngeal phthisis, but without any special description of the laryngeal disease. He says, with regard to the

¹ "Deutsche Med. Woch.," 1890, No. 49.

² "Internat. Klin. Rundschau," 1890, No. 43.

³ "Deutsche Med. Woch.," 1890, No. 49.

reaction, that he has only observed in one case a sure reaction, in spite of the fact of his cases varying from the slightest to the gravest character. It is possible that this is due to the small doses with which he began the treatment. The author believes that the redness of the vocal bands can be produced by the evening fever and cough, since the patients in the evening have more secretion and more congested vocal bands.

As to this point, I cannot agree with the author. In my cases I have examined feverish and coughing patients in the evening before they were treated by injections, and have found no hyperæmia of the vocal bands or the mucous membrane, but after the injection, the next morning, I found swelling and redness of the mucous membrane.

THOST (Hamburg) reports some cases which he has observed in the Allgemeine Krankenhaus zu Hamburg.¹ (1) A patient, twenty-one years old, with tubercle of the lungs and fistula ani. The laryngoscope showed injection of the whole larynx, infiltration of the inter-arytenoid mucous membrane, slight stenosis, and stridor. Commencement of cicatrization of multiple flat ulcerations. After the first injection, œdema of the right arytenoid cartilage, and swelling of the vocal cords, which were covered with yellow greyish secretion. Next day the œdema was less. After a second injection, increase of the swelling and injection. (2) This patient will be described under my cases. In two other cases (3 and 4), with tubercle of the lungs and larynx, injection and swelling occurred after the first injection. The author mentions also one case of commencing cicatrization of a tuberculous ulcer of the tongue after one injection.

LEYDEN briefly reported upon a case of laryngeal phthisis in the Gesellschaft der Charitéärzte.² Slight ulceration upon the posterior wall; dulness at the apices; no sputum, and no bacilli. After two injections of 0'001, 0'002, slight redness of the laryngeal mucous membrane was seen.

A. FRAENKEL relates (in the Deutsche Gesellschaft für Öffentliche Gesundheitspflege³) two cases of laryngeal phthisis, in which he has observed after the injection ulcers of the tongue and the gums. They were not tubercular ulcers, and readily healed.

In the Jewish Hospital in Hamburg the first injections with Koch's lymph were made on the 1st December. Since this time we have observed the effects of the treatment in sixteen cases of laryngeal disease. Of these cases, twelve were phthisis laryngis; one a case of lupus of the pharynx and larynx; one a case of lupus of the nose and larynx; and one case with dubious, and one with negative result.

FIRST GROUP.—LARYNGEAL PHTHISIS.

(1) Niemann, a merchant, twenty-one years old, with tubercle of the lung and caries of the right foot, was nearly aphonic, had stridor on exertion, difficulty of swallowing, and cough. The mirror showed both vocal bands to be thickened and ulcerated, and remaining during inspiration in the cadaveric position, the inter-arytenoid mucous membrane was

¹ "Deutsche Med. Woch.," 1890, No. 50.

² "Deutsche Medicinalzeitung," No. 100.

³ *Edem loco.*

swollen and indented. On the left ventricular band was an ulcer with sharp walls covered with secretion. After six injections of 0'001-0'005 the vocal bands were no longer ulcerated and were less thickened, the ulcer on the vocal band was nearly cicatrized, and the glottis more open, the voice better, and the difficulties of swallowing disappeared.

(2) Lewinsky, twenty-seven years old, with advanced tubercle of the lungs, hoarseness and difficulties of swallowing. The mirror showed œdema of both arytenoid cartilages and slight redness of the left vocal band. The inter-arytenoid mucous membrane was swollen and indented. After the first injection the redness of the left vocal band was much increased. On the processus vocalis was a necrotic spot, circumscribed by a red demarcating line. After six injections, twelve days later, the necrotic tissue was exfoliated, and the vocal band had at its site a cicatricial spot, where the loss of substance had been. The posterior part of the vocal bands did not close. The subjective symptoms were not improved.

(3) Althaus, thirty-two years old : tubercle of the lungs very advanced, and hoarseness. The right vocal band was transformed into a thick red tumour with irregular edges. After three injections the right vocal band was not so thick as before. Cough and expectoration improved.

(4) Landschulze, thirty-seven years old : tubercle of the lungs, great hoarseness, both arytenoid cartilages œdematous. The ventricular bands so greatly swollen that the vocal cords could not be seen. The epiglottis was transformed into a cylindrical tumour. After two injections of 0'001-0'003 no general or local reaction. After the third injection 0'005, temp. 40°, the epiglottis less swollen and covered with thick yellowish secretion, the swelling of the ventricular bands had diminished, so that the vocal cords could be seen. Subjective symptoms showed no change.

(5) Drewes, thirty-three years of age : tubercle of the lungs and slight hoarseness. The mirror showed ulceration of the processus vocalis and arytenoid cartilage of the left side. The first injection of 0'001 was without effect, the second of 0'002 was followed by great general reaction. Locally no change was visible.

(6) Barth, thirty-three years of age : tubercle of the lungs and hoarseness. The mirror showed slight swelling of the posterior wall with ulceration of both arytenoid cartilages. The first injection of 0'001 was without general reaction. Next day the swelling and the ulcers had disappeared.

(7) Feuerschutz, thirty-two years old : hoarse for some years. Two years ago I had treated him, and at that time both vocal cords were ulcerated. I left him with a good voice and healthy vocal cords. The right vocal cord was now healthy, but the left cord swollen and thickened in the middle. There was now only slight hoarseness, but cough and expectoration. Tubercle of the lungs. General reaction after the third injection. The thickened part of the vocal cord was now transformed into an ulcer. Two days later the ulcer disappeared.

(8) Bumann, thirty-four years old : tubercle of the lungs, slight hoarseness. The mirror showed a slight ulceration on each processus vocalis. During the reaction, after the first injection, redness of both

vocal cords occurred. After the fifth injection both ventricular bands were swollen, covering the greater part of the vocal cords. The ulcerations enlarged, and spread over nearly the whole free edges, with reddened walls.

(9) Berthold, a journalist, thirty-two years old : ill for some years with tuberculosis of the lungs. The patient had been hoarse for some years, and was now nearly completely aphonic. He has been treated in Berlin by Prof. Krause by curettement. The mirror showed the epiglottis to be transformed into a cylindrical tumour, covered with granulations and ulcerations ; both arytenoid cartilages were swollen and œdematous ; the right vocal cord was covered with secretion, and the left cord dark red, and lower than the right. It seemed as if the connective and fibrous tissue was destroyed, and the muscle was laid bare and ulcerated. After the first injections, in spite of great general reaction, there was no local change ; after the fifth injection, ten days later, the redness of the epiglottis increased, and the vocal cord was less red. Improvement of the expectoration followed.

(10) Helene Henne, nineteen years old : very advanced pulmonary phthisis, and the patient in hectic condition, with high fever. She had been already treated for a month by Dr. Cornet with Koch's injections. Nearly the whole mucous membrane of the larynx and the vocal cords was destroyed, the whole mucous membrane being covered with yellow-greyish secretion. Up to now there has been no improvement, either subjective or objective, which cannot be expected in a case so desperately advanced.

(11) Frau Haack, twenty-five years old : pulmonary tubercle, in a hectic state, with hectic diarrhœa, and fever in the evening ($39^{\circ}6$). I regret not having seen her before the first injection was made. She became hoarse after the first injection, which was followed by great reaction. The mirror showed the epiglottis, vocal cords, and ventricular bands to be normal, except that they were very anæmic. Slight swelling of the arytenoid cartilages was present. During inspiration a large sub-glottic swelling could be seen, originating under the vocal cords and the posterior wall. On the left side the swollen mucous membrane was ulcerated in the middle. After the third injection, six days later, the ulceration had disappeared, the swelling still existing. Commencing adhesion of the free edges of the vocal cords at their anterior part was seen.

(12) Helene Pape, twenty-two years old : tubercle of the lungs ; no hoarseness. The left vocal cord was of a yellowish colour, and there was slight infiltration of the posterior wall. After the first injection the reaction commenced a few minutes later, with shivering and hoarseness (temp. 40°). The vocal cords were both reddened. For the next few days there was no change. On the eighth day the left vocal cord was red, and on the left ventricular band was a flat ulceration, covered with yellowish secretion. The infiltration of the posterior wall was transformed into an ulceration.

SECOND GROUP.

(13) Diedrichsen, fifty-four years old : five years ago had pleuritis and hæmoptysis ; now, at the right apex, was dulness and bronchial respira-

tion ; hoarseness. Five injections were without any reaction. The mirror showed a polypus on the left vocal cord. Tubercle bacilli were not found.

(14) Danziger, twenty-nine years old, for some weeks had been aphonic. I had occasion to see the patient before the treatment. The only complaint of the patient was aphonia. I found œdema of both arytenoid cartilages, and immobility of the left vocal cords. The patient related that a papilloma had been removed from him some days ago by a physician. Judging from the result of examination it was certain that it was not a benign neoplasm, but it was not possible to say if there was anything malign or tubercular. The patient went into the Allgemeine Krankenhaus, and received an injection of 0·01, with a reaction of 38° 9. Dr. Thost, who observed him there (his second case), described miliary escharotic points on the arytenoid cartilages and the epiglottis. Within the next few days these points had disappeared. In the sputum were two bacilli in each cover glass preparation. The next day the patient went into the Jewish Hospital, and so came under my observation. During the twelve days I saw him he never had any reaction, not even with 0·015, and no bacilli were found. In the larynx the œdema was pale, and there also could be seen at times little vesicles on the epiglottis and the arytenoid cartilages. But they certainly were not at all similar to the other cases, but resembled herpes. A herpes following the injection has been already described by Lublinski and Lindner. On the eighth day I found such a vesicle on the left vocal cord, up to now healthy. The voice of the patient has now improved. I must say that I now believe the diagnosis of the laryngeal affection to be doubtful between phthisis and malignant tumour.

THIRD GROUP.—LUPUS.

(15) Gaetze, thirteen years old ; lupus of the nose and nasal mucous membrane. I examined the patient after the first injection, which was followed by great reaction. The pharynx and the larynx were unaffected, except the epiglottis. This was changed into a cylindrical tumour, and covered with granulations, characteristic of lupus. Of the granulations the greater portion were covered with a yellow-greyish membrane ; they were necrosed by the effect of the injection.

(16) Bahr, seven years old, with many tubercular affections of the bones, and an exanthema diagnosed as lichen cachecticorum. The voice was not hoarse, but there was a rather severe stridor. The soft palate and the uvula were covered with granulations, and also the tonsils. In the same manner the surface of the lingual tonsil and the epiglottis were affected. The latter was immobile, so that the vocal cords could not be seen, but the surface of the arytenoid cartilages was diseased in the same manner. After the first injection, during the reaction period, the soft palate was swollen and œdematous, the uvula was double as large as before, and the epiglottis was also swollen. Three days later the soft palate and the uvula were covered with a thick yellowish necrotic membrane, in the same manner as the pharyngeal and lingual tonsil ; the epiglottis and arytenoid cartilages were covered with yellowish masses. The stridor was much increased, so that tracheotomy was considered. During the next night the stridor diminished and ceased altogether, and

the following day the mucous membrane of all parts was free from lupus, and only covered with little necrotic pieces not yet removed; the epiglottis became so movable that the vocal cords could be seen. The next day, the sixth day of the treatment, the necrotic pieces had nearly all disappeared. The pharynx seemed to be free from lupus, and the larynx nearly cured. A second injection of 0·003 was made. This was followed by great reaction and stenosis of the larynx, which increased so much that tracheotomy had to be performed. The pharynx is now covered with necrotic masses, but these are not so great as after the first injection.

Tracheotomy is an event which must be prepared for in exceptional cases, of which I will relate an example at another time.

OBSERVATIONS OF KOCH'S METHOD OF TREATMENT,

DURING A VISIT TO BERLIN.

By W. C. PHILIP, F.R.C.P. & S. (Edinburgh), Rothesay.

IT is extremely difficult to give any opinion definitely as yet, even in minor details, of this important method of treatment, and a short visit to Berlin scarcely affords an opportunity of giving a report. As six months, at least, must elapse before we can say much about its advantages, it may be useful to place before your readers a few notes taken in Berlin during a four weeks' visit.

The minimum dose given at first may be put down at '001 gramme. Other surgeons are more heroic and they have no hesitation in giving '005 gramme and then '01 gramme, and as yet even in laryngeal cases without any difficulty arising. Most observers in the throat clinics seem to think that one milligramme is enough, and in view of the case, reported from Bonn, of tracheotomy owing to stenosis after injection it is best to begin with small doses. Even in lupus with external manifestations only it is best to be careful at first.

In a case, for example, where '005 gramme was injected, the patient, a woman, became unconscious and remained so for twenty-four hours. After recovering from this the same dose was given and caused unconsciousness for twelve hours. Fourteen days afterwards I saw her; the lupus was improving, and the reaction was not so severe. The dose is gradually increased until one decigramme can be tolerated.

Another important feature to be observed in the course of treatment is the appearance of lesions hitherto unsuspected because of their quiescence.

I.

A most interesting case of this kind was admitted for ulcer of stomach. Nineteen years of age. A lupus cicatrix was observed on the right side of the nose, small but perfectly formed. The middle finger of the left hand was wanting, had been amputated for tubercular disease of bone. No signs of dulness to be found in the lungs, although examined particularly four

or five times ; consequently, as larger injections are given in lupus she got '005. In five hours her respiration was 40 ; three hours after, temperature was 103°, with 58 respirations in minute. The nose became swollen and œdematous with a red blush spreading all over it ; the nostrils were closed from swelling. The physical signs after recovery from reaction showed dulness of the base of right upper lobe about size of palm of the hand, with crepitant râles. She had also râles at the base of both lungs. She developed also a tubercular ulcer on the first ring of the trachea, and two spots on the left side of the uvula. Here is a case of latent tuberculosis, which no doubt would have showed itself sooner or later, but which was undoubtedly diagnosed and brought out by injection of Koch's lymph. In this case the prostration was intense—she was, in fact, comatose. She recovered from reaction in twenty-four hours. Three days after she got another injection of '01 (centigrammes) with temperature of 104° and 68 respirations, with again intense prostration. The dyspnoea at its worst lasts from half to one hour. After recovering from the second injection (twenty-four hours) the tracheal ulcer was found to be healing and the lung clearing up.

She was left for five days without injection ; then got '005, with temperature 102·7° and 60 respirations. Four days after '003, temperature 100·4° and 58 respirations. Three days after (9th December) the nose had nearly healed ; the lungs cleared. Between the injections she gains in weight, and the trachea and uvula nearly healed.

I noted amongst others the following cases :—

II.

In this case, girl, twenty-one, there were no signs of phthisis to be found, yet bacilli were discovered in sputum ; cords uneven.

26th November she got '002 ... Temperature 100·8.

29th " " '005 ... No temperature reaction.

1st December " '01 ... 103·6°.

After the first injection, two ulcers appeared on the anterior part of the vocal cords. Since then the ulcers have gradually improved ; on 9th December I found them almost healed, and the voice very much stronger.

III.

Male, thirty years. Five or six years ago had hæmoptysis with patch of tubercular infiltration, three inches square, of the right lung above the nipple ; since then has been very careful, passing the winter in the Riviera, and has been in good health. Three years ago had lupus on forehead ; small patch. 3rd October—was burnt and treated with hardly perceptible cicatrix. Spring of 1890, another lupus patch in left axilla ; burnt three months ago, and was in process of healing when he came to Berlin to try Koch's treatment. The injections in his case had no effect whatever on the patches of lupus, the cicatrix on forehead remaining intact, not even showing increased redness ; a week after beginning the treatment the patch in the axilla healed perfectly.

24th November ... '001 ... no reaction.

25th " ... '002 ... " "

26th " ... '003 ... " "

Not the slightest rise in temperature. After the third injection he felt tired—headache ; but in addition to an increase of area of dulness in the right lung, a small patch of dulness appeared in the left apex, and the sputum was full of bacilli. Cough and expectoration increased.

28th November—'008 ; no temperature reaction ; complains of slight dyspnœa and pain over right lung ; dulness ; dry pleurisy, pains in limbs and feeling of fatigue.

30th November—'01 ; no temperature reaction, but return of dyspnœa and pain ; pleuritic pains disappearing ; left apex clearing ; cough and expectoration much less.

4th December—'01 ; no temperature reaction ; pleurisy gone ; slight feeling of fatigue and slight headache, which pass off in a few hours ; left apex perfectly clear ; area of dulness in right lung diminished to original dulness.

8th December—feels much better ; very little cough and expectoration.

This temperature reaction is not constant, but in the absence of increased temperature one must look upon increase of local signs, dyspnœa, or even lassitude and pains in limbs as indicating reaction. It is advisable to begin with a small dose, and repeat (say) twice, comparing symptoms of reaction after each injection ; in this way one gets a standard for the individual case, and can then proceed with increased injections according as the reaction diminishes in intensity. The reaction appears from eight to twelve hours after injection, although in some not before twenty-four hours have elapsed, and in a few, not till after two or three injections have been made ; in the last variety it would be dangerous to increase the injection when reaction is delayed. In temperature reaction the rise increases, as a rule, till the third or fourth injection, and then gradually decreases, unless the strength of injection has been greatly increased.

In Levy's clinic they have given from '02 to '04 in laryngeal cases, with very great increase of swelling, and with complete reaction. I think this is very risky, as there is a danger of local swelling. Prof. B. Fraenkel recognises the danger, and begins with a very small dose, gradually increasing.

In a case of laryngeal phthisis, in which there was a greyish-white swelling on posterior wall of larynx, after the first injection the swelling showed shrinking on surface. After the second a different appearance (*zerklüftung*) was observed, and after the third the swelling appeared as a flat elevation of surface. Patient felt better ; less irritation and consequent cough. His first injection was '01 ; second '02.

'01	...	...	Temperature	39'6	Celsius.
'02	...	...	"	39'7	"
'02	...	...	"	40'3	"
'02	...	...	"	39'5	"
'02	...	...	"	40'	"
'03	...	...	"	39'8	"
'02	...	...	"	38'8	"
'02	...	...	"	39'5	"

After '03 he had oppression of the breast. Expectoration diminished.

IV.

Patient—young man. Tubercular disease of lower extremity of femur ; frequent diarrhœa. Has *albuminuria to extent of one-half*.

11th November...	'01	...	39'3 deg.	Slight reaction may be on account of bad lymph.
13th "	'01	...	36'5 "	
15th "	'01	...	38'6 "	
20th "	'03	...	39'8 "	
22nd "	'03	...	39'5 "	
25th "	'05	...	39'4 "	
26th "	'05	...	— "	
1st December ...	'01	...	38' "	

On 9th December, patient much the same.

V.

Woman, thirty-five years of age, came in with general weakness. After two or three days, tubercle was diagnosed. Bacilli found in sputum ; night sweats and hectic. She was badly nourished and very feeble. She had diarrhœa. Was treated by injection.

November 17 received '002 only slight rise of temperature.

"	19	"	'005	...	temperature 100'4°
"	21	"	'008	...	" 100'4°
"	23	"	'01	...	" 101°
"	26	"	'01	...	no reaction of temperature.
"	29	"	'014	...	" " " "

The expectoration is slightly increased.

I saw her next, December 9th. She had been going on in the same way with very slight or no reaction in temperature. She receives now '02 (2 centigrammes). The diarrhœa is a little better, but she is no stronger, and is in fact in the same condition as on admission.

It appears to me that the remedy will be useful in incipient cases of phthisis. The hectic fever, night sweats, etc., in these diminish, the expectoration becomes considerably less, the patient feels easier, and does not lose, and may gain, flesh after the injection is stopped. How far these improvements may be permanent time only will show.

KOCH'S METHOD OF TREATMENT.

Reported by Dr. MACINTYRE (Glasgow).

THIS method of treatment is being carried out by Dr. Philp in Edinburgh, and in three of the Glasgow Hospitals under the physicians and surgeons attached to them. The Glasgow Western Infirmary cannot as yet give reports, but the cases in the Victoria Hospital are said to have reacted satisfactorily, and, in lupus, Dr. Napier says the results are very promising. In the Glasgow Royal Infirmary, Drs. Wood Smith, Work-

man and Lindsay Steven, after visiting Berlin, got a good supply of the fluid. In all, thirty patients are being treated, more than half of whom are cases of phthisis pulmonalis. It may be said of all, surgical and medical, that they have exhibited the typical reactions and are progressing satisfactorily enough, although it is too soon to speak of results. At the suggestion of Dr. William MacEwen, a committee has been formed of the staff, every patient being seen by them all, and only early and what they consider suitable cases put under treatment. The precaution given by Koch about preparation, dosage, and careful watching of the reactions, have been fully gone into and observed.

The reports of the committee will be issued afterwards, but by the kindness of Dr. Wood Smith we can make some notes of throat cases which have been under the observation of Dr. MacIntyre for some time. In phthisis pulmonalis a careful scrutiny of the larynx has been made, but as yet none of the cases not diagnosed to have laryngeal complications have shown signs of past lesions coming into view, which condition we know from reports has been recorded frequently on the Continent.

The following have been selected because of their interest to those engaged in throat work :—

Case I. : A lady, aged thirty-two. Evidence in physique and chest signs of incipient phthisis. History of throat trouble since 1887, and at that time pronounced "catarrh" by Continental physicians. Two months ago bacilli found in sputum by Dr. Smith. One month ago, seen by Dr. MacIntyre, who diagnosed rhinitis, pharyngitis, and distinct evidence of early phthisis laryngea in the ary-epiglottic folds and inter-arytenoid membrane. Treated with menthol, constitutional remedies, etc., with no benefit. Came into the Glasgow Royal Infirmary to have Koch's method of treatment. Had seven injections—dose varying from one milligramme to one centigramme ; typical reactions ; locally, increased irritation, the redness and swelling subsiding somewhat each time, as the temperature fell. After the seventh injection a distinct change to be noted on the anterior surface of the right arytenoid cartilage—a white elevated spot, about a quarter of an inch in diameter, to be seen as if something were approaching the surface. Throat now generally slightly improved, and Dr. Smith thinks chest also better.

Case II. : A girl, aged ten, suffering from lupus of nose. Gradual development for ten months. Began a small patch on bridge of nose ; now greater part of the nose destroyed, and disease involving interior of both nostrils. Every known method of treatment, local and constitutional, for tubercle (also antispasmodic) tried by Drs. Fleming and MacIntyre—nothing did good. One month ago, put under Koch's method. First three or four injections were small—.0006 to .001 gramme—and without result. Since then, larger doses—.005—have produced typical reaction, locally and constitutionally, and the local conditions are distinctly improving.

Case III. : A case of lupus in a girl of thirteen. Under observation of Drs. Fleming and MacIntyre. Disease involves nasal fossæ, nasopharynx, and supra-glottic regions. Small dose, and (as in last case) no reaction. For the past fortnight, doses of .002 gramme to .005 gramme

caused typical reaction constitutionally. As yet the local conditions no much changed. Nothing in the past has had any effect.

Case IV. : A girl, aged twenty-one, with lupus involving nose, nasa fossæ, palate, and supra-glottic region. Under care of Dr. Wood Smith, and seen by Dr. MacIntyre. This case has given most satisfaction in every way. Injections of '002 gramme produced typical constitutional reactions from the first, and the throat and nose showed great increase in swelling, redness, and secretion. The case has decidedly improved after five injections.

In one case of phthisis pulmonalis, hæmoptysis after the first injection occurred, for the first time in the history of the patient. As yet no difficulties have arisen from stenosis. No case with laryngeal complication has had more than one milligramme to begin with

CLINICAL NOTES.

MALIGNANT DISEASE OF THE ŒSOPHAGUS SEEN WITH THE LARYNGOSCOPE.

By HUGH MONTGOMERIE, M.D., Assistant Physician to the West
Cornwall Infirmary, Penzance.

BEING unable to find recorded in the books a similar condition, and as the laryngoscope was of service, I trust the history of this case will not be without interest to the readers of this Journal.

On November 3rd, 1890, I was asked to see Mrs. X. with Mr. Wearne, of Helston. The patient was forty-nine years of age, had always been healthy, had lost one aunt of cancer of the right side of the neck, another of phthisis, and stated the other members of the family to be quite healthy. She complained of a "wound" in the neck on the left side, huskiness of voice, loss of flesh, and dysphagia with cough. In appearance she was much bronzed, which I learned was her natural colour for many years.

The history was as follows: In July last she consulted Mr. Wearne for a hard, almost painless, swelling the size of a walnut on the left side of the neck, some three inches below the angle of the jaw and behind the thyroid cartilage. This swelling eventually softened and discharged freely from a sinus. The voice had been husky for a year. In September last she first noticed that deglutition was difficult. On the day of this examination, when she swallowed fluids, she observed they came through the opening of the sinus.

On examination I found the opening of the sinus in the position above mentioned, and surrounded by hard bluish cicatricial tissue. A probe could be passed into it to the depth of two inches in a slightly upward direction. There was a swollen hard gland on the other side of the neck, and some above the clavicle on the left side. On directing her to

swallow some milk, the act of deglutition was noisy and evidently difficult, some of the fluid coming through the sinus. To swallow solid matter was much more difficult. The voice was weak and husky. There was slight inspiratory stridor and paroxysms of cough. The only pain was in the gland on the right side of the neck.

In the mouth and fauces nothing abnormal was to be seen.

With the laryngoscope, the larynx could not at first be seen, owing to the obstruction of a cauliflower mass which seemed to spring from it. However, on further examination the larynx was found to be red, the left false cord swollen, and the left true cord red and fixed in the position of adduction. The cauliflower mass was observed to be quite free from the larynx, arising from the œsophagus, probably its anterior wall, and overriding the arytenoid cartilages. It was not considered advisable to pass an œsophageal bougie. The lungs and heart were sound, and there were no other symptoms of pressure on the recurrent laryngeal nerve.

From the consideration of these facts, we had no difficulty in diagnosing malignant disease of the upper part of the œsophagus. The case terminated fatally two days after the examination by syncope while sitting up to take nourishment.

ASSOCIATION MEETING.

The British Laryngological and Rhinological Association.

*The Seventh General Meeting of the Association was held on November 28, 1890.
at the Rooms of the Medical Society, Chandos Street, London, W.*

The chair was taken by Mr. LENNOX BROWNE.

The minutes of the last meeting were read and confirmed.

The following gentlemen were elected Fellows of the Association—

V. H. WYATT WINGRAVE, M.R.C.S., F.S.A.

Dr. DRINKWATER, Wrexham.

EDMOND F. TREVELYAN, M.D., Leeds.

JOHN BARK, L.R.C.P.S., M.R.C.S.E.

SAMUEL LODGE, Junior, M.D., M.B., B.S., Bradford.

The election of office bearers for the coming year then took place, when the following Fellows were elected—

President.—Dr. HUNTER MACKENZIE, Edinburgh.

Vice-Presidents.

England, Dr. DUNDAS GRANT, London.

Scotland, Dr. MACINTYRE, Glasgow.

Ireland, Dr. SANDFORD, Cork.

Council.

Metropolitan Members.—Mr. MAYO COLLIER, Mr. HOVELL, Dr. NORRIS WOLFENDEN, Mr. LENNOX BROWNE.

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Extra-Metropolitan Members.—Dr. HUNT, Liverpool, Dr. ADOLF BRONNER, Leeds.

Hon. Secretary.—Dr. GEORGE STOKER.

After the result of the election was announced, the President, Dr. Hunter Mackenzie, took the chair, and expressed his thanks to the Fellows of the Association for having elected him their President.

Mr. MAYO COLLIER read a paper upon *The Nature of the Tonsils and Lymphoid Tissue of the Pharynx*, which was published in this Journal, Vol. iv., No. 12.

Mr. KENDAL FRANKS read a paper upon *A Case of Lymphadenoma affecting the Tonsils*.

The case which I desire to lay before the Association is one which presents many features of interest, and chief amongst these were the differences of opinion which existed regarding the diagnosis.

A gentleman, aged forty-six, came to see me on the 22nd of April last, accompanied by his wife and brother. As soon as he sat down and began to talk, I perceived that he was afflicted with nasal obstruction, for in addition to a well-marked nasal voice, he persistently kept his mouth open. He told me that he had never been able to breathe freely through his nose, generally not at all. For more than fifteen years he had been troubled with his throat, and always had large tonsils. Three years ago he got a fall while out hunting, and hurt his hip, since which time he had never been well. He got into bad health, several glands in the groins, axillæ, and neck enlarged, and he suffered persistently from diarrhœa. He had been under medical treatment for the diarrhœa on and off during the last three years, but nothing seemed to do him any good, and he lost some flesh and a good deal of strength. He was very much troubled with the enlargement of his tonsils, which greatly aggravated the already existing obstruction in the nose. About a year before I saw him he consulted a Dublin surgeon, who, he said, removed a piece of bone from the nose, and also took a slice off each tonsil. The nasal obstruction was not relieved by these procedures, but his throat was improved for a short time. However, the tonsils began to enlarge again, and soon his distress became very great—chiefly from difficulty of breathing, and of deglutition. It was for these troubles, he explained, he sought my advice. I accordingly proceeded to examine him. I found both tonsils enormously enlarged, they seemed completely to block up the faucial opening; they looked pale, the follicles penetrated to a great depth, and the whole appearance suggested to me that it was a case of unusual hypertrophy of the tonsils. On account of the size of the tonsils, it was impossible to obtain a rhinoscopic view of the post-nasal space, but on introducing a finger I could feel that the naso-pharynx was completely blocked by masses of adenoid tissue. I then told the patient that the only thing which would give him relief was to remove the tonsils completely, that they should be enucleated, as it would not be sufficient or, in my opinion, wise to excise them; and at the same time I advised that the naso-pharynx should be thoroughly scraped out.

Although he expressed no objection to the idea of an operation, there was a certain amount of hesitation on the part of the patient, which was finally formulated in the question : " I want to know, doctor, is it a case of sarcoma ? " I told him that his question was the first thing which suggested the idea of sarcoma to me, and that before answering it, I would like to examine him again. This I did, and then I told him that I did not believe it was, because in the first place it did not look like sarcoma, and secondly, because both tonsils were enlarged, the right rather more so than the left ; whatever was the disease in one it was the same in the other ; that sarcoma of one tonsil was sufficiently rare, but that I had never seen or heard of sarcoma attacking both tonsils simultaneously. " The very thing Sir James Paget said," he replied. " Why," I said, " did you consult Sir James ? " " I did," he said, " and I may as well be square with you." He then gave me the following supplemental history. Early in April he had consulted several medical men in Dublin, all of whom agreed that he had sarcoma of the tonsil, but there was some divergence of opinion as to whether the case should be operated on. Finally, it was agreed that an operation should be performed. He then consulted another surgeon, who gave it as his opinion that the case was " not malignant," and also advised operation. His mind being upset by the conflicting opinions he had received, he determined to go over to London and hear what they had to say to him there. He was not, however, more fortunate in eliciting a unanimity of opinion. He first consulted a specialist, who gave it as his opinion that the case was one of sarcoma, and to confirm the diagnosis he removed a small piece of one of the tonsils for microscopical examination. He then wrote his opinion that the case was one of a round-celled myxo-sarcoma, and that after carefully examining the attachments of the growths he had come to the conclusion that it would not be satisfactorily removed by operation, and that re-development would be almost certain to take place ; and, therefore, he recommended that the growth should be allowed to remain. The patient then consulted Sir James Paget, who expressed the opinion I have alluded to above. It was under these circumstances that he returned to Dublin, and consulted me. I found that one of the evidences relied upon to support the sarcoma theory was the enlargement of certain glands in the neck, but I found that this glandular enlargement not only existed on both sides of the neck, but that the same condition existed in both axillæ, and was very marked in the glands of the groin. He had noticed this general enlargement of the glands throughout the body ever since he had the fall out hunting, that is, during a period of three years. I also told the patient that I did not think too much importance need be attached to the microscopical examination, as I did not think it was possible to say positively what was the nature of the growth from a microscopical examination of a small piece, and that the only way the microscope could help would be by a careful examination of the whole of one tonsil after removal. I did not, however, tell him, though I mentioned it to his relatives, and subsequently discussed it with the gentleman who assisted me at the operation, that the conclusion I had come to was that he was suffering from Hodgkin's disease, non-

leukæmic lymphadenoma, and that the enlargement of the tonsils and of the post-nasal adenoid tissue was but a part of the general glandular disease.

The patient finally agreed to undergo the operation, and accordingly I performed it on the 30th of April last, assisted by Mr. Philip Crampton Smyly and Mr. Swan. The patient was placed under the influence of chloroform, in Rose's position, that is, with the head hanging over the end of the table, and when fully narcotised I proceeded to enucleate the right tonsil first. Scarcely had I detached the lower part of the right tonsil when the patient ceased to breathe, owing to the very small aperture between the tonsils and the base of the tongue becoming occluded. By pulling up the tonsils and pulling out the tongue, respiration was restored, only, however, to stop again as soon as the operation was recommenced. This time the expedient of raising the growths and drawing the tongue forward were ineffectual, and the patient became rapidly cyanosed. I had no alternative but to perform tracheotomy as rapidly as possible, and when the tube was inserted, artificial respiration had to be employed for several minutes before natural breathing was restored. I then proceeded to enucleate the tonsillar growths, which I accomplished chiefly with the finger nail, and without much difficulty. I then passed a curved Volkmann's scoop through the nostril, and with the right index finger passed up behind the palate I scraped the whole post-nasal fossa clean. The hæmorrhage at this stage was, as is usual, brisk, but a tampon dipped in Mackenzie's tannic and gallic acid mixture rapidly checked it. The patient was then put back in bed. He made a very satisfactory recovery. On the fourth day the tracheotomy tube was removed, and at the end of a fortnight he was able to return home. He could then breathe freely through the nose, and experienced great comfort from his throat. I saw him about a fortnight later. The throat gave him no trouble, but he was much troubled with looseness of the bowels, as he had been before the operation. I have not seen him since, but I have been informed that he has no return of the distressing throat trouble for which he consulted me, but that Hodgkin's disease has steadily progressed, profuse diarrhœa is running him down, and, as we might have expected from our knowledge of the disease, he is gradually sinking from exhaustion.

There is now no question as to the diagnosis. Of course the operation was not performed with the idea that it would check the progress of the general lymphadenoma; it was done solely with the view of relieving what was a most urgent and distressing symptom, and this it has accomplished. It is now seven months since the operation was performed, and I doubt very much, had it not been attempted, that he would have lived so long; but even had not suffocation ensued, which seems probable, his remaining days would have been far more miserable than they have been.

But the main object I have had in view in recording this case is to call attention to what I believe is a rare condition, and one which I had not previously observed myself, namely, enormous enlargement of the tonsils occurring as a manifestation of Hodgkin's disease. I shall be glad to know if any of the members of this association can support the record of this case by examples in their own practice. It was mainly due, I believe,

to the unusual nature of the case that in the earlier stage there was such difficulty and divergence of opinion regarding the condition of the tonsils. The attempt to decide the question by the microscopical examination of a small piece of the tonsil must to every microscopist be evidently futile. It would be practically impossible to distinguish between the hypertrophied gland tissue, as is found in such a case as this, and a "myxosarcoma." The only way of deciding such a case is by the tendency or otherwise of the growth to infiltrate the contiguous structures, and in this case I found no such tendency at the time of operation. Moreover, when the tonsil was removed, I requested Mr. Alexander McKee, the eminent pathologist, to examine the entire growth, and he informed me that he could not find on section any tendency to infiltration round the edges of the growth, and although he would not like to speak positively from the inherent difficulties of microscopical diagnosis in such a case, he believed from what he saw that it was a benign case, one of simple hypertrophy.

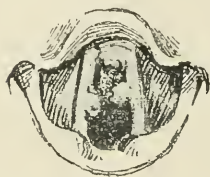
MR. LENNOX BROWNE read a paper, entitled *A Case illustrating the Possibility of Hypertrophy of the Pharyngeal Tonsil being an Etiological Factor of Papillomata in Children*.—Estelle N., aged six and a half years, was first seen by me, on the recommendation of Dr. McDonagh, of Toronto, on the 13th September, who sent me the following history of her case :—"The patient has always been in good, though not robust, general health. About the end of December last (1889) she contracted a 'cold' in the throat, with some hoarseness, but seemed to recover from it after a few days. However, during February the voice again became slightly husky, without any other symptom, and when I saw her on March 3rd the voice, though not clear, was distinct, and required a slight effort to produce. In the larynx was the following condition : On the upper surface of the anterior half of the left true cord was a red granular-looking new growth, about the size of a flattened split pea, which slightly overlapped the free edge of the cord. There was also a small point of new growth (like a granulation) on the anterior and inner surface of the right arytenoid cartilage. The mucous membrane on those parts of the true cords free from new growth was red, and devoid of the normal glistening appearance. I considered it a case of papilloma. As the child was so intelligent and willing to assist, I hoped by the introduction of probes so to accustom the parts to their presence that I might pick off the tissue with forceps under cocaine anæsthesia, or to destroy it with chromic acid. The larynx, however, would not endure the presence of forceps sufficiently, and, as the growth on the left cord was becoming larger, I determined about the 1st April to remove it by passing a curette. This I did two or three times, at intervals of a week or ten days, and again (of necessity) under chloroform twice, with the result that there was very little indeed of the neoplasm remaining, and the voice greatly improved. However, when left untouched for two or three weeks there was evidence of commencing recurrence. Finally, I have introduced chromic acid under chloroform, and also during

"consciousness, always with improvement, but always with the same tendency to recur. I propose next to introduce one of Dr. O'Dwyer's tubes, and let it remain *in situ* an indefinite (?) period, trusting that the continued pressure may destroy the growth. There is one case on record of this plan of treatment of papilloma being successful. I saw a case in New York the other day where a tube had been left in the larynx for several months without injurious consequences. The child's health has lately been somewhat debilitated, and I believe a sea voyage will benefit her, besides the opportunity being afforded of gaining your advice."

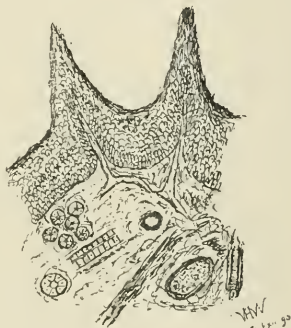
The mother who had watched the case (a highly intelligent lady) had assured me that Dr. McDonagh had repeatedly demonstrated to her in the mirror that the glottis was entirely free from growth, and especially just before she left Canada, a few weeks previously to her first visit home. She also stated that the child's voice was clear at that date.

On examining the child with the laryngoscope, I was able to confirm the report Mr. Jakins, who had seen the case in my absence, had made.

The larynx generally was hyperæmic, the right vocal cord especially so, and there were three growths evidently of a warty character, viz. :



Laryngoscopic Appearance.



Section of Laryngeal Growth.

one situated at the anterior commissure, one attached mainly to the superior surface of the right vocal cord, and a third situated rather more anteriorly, and at the free edge and under-surface of the left cord. The first two were of a more rosy colour than the last.

The fauces were somewhat thickened, but there was no great hypertrophy of the tonsils, and the child, although evidently a mouth-breather, was able to breathe fairly through the nose, did not snore, and could use her pocket handkerchief fairly well for a child. It is of interest in this connection to show a photograph of my little patient and her seven sisters, by which it will be observed that five of them are evidently mouth-breathers, and it may also be noted that the camera is a very good witness on this point, since the absence of emotion when a photograph is taken allows the features to assume the expression most usual to them..

The child had gone through so much suffering that it was only possible to operate under chloroform, and only those who have attempted

this procedure can realize how little space there is even for illumination and visual inspection by the mirror, much less for introduction of the snare or forceps. Moreover, while the forcible dilatation of the jaw by gag by one assistant, and the drawing forward of the tongue by another, conduce to this obstruction, they also materially shorten the period of anæsthesia. Nevertheless I was so fortunate as to clear the larynx entirely in three sittings, allowing an interval of three or four days between each. No further treatment was adopted beyond that of a wet compress worn at night, and internal remedies of an analeptic character.

The following is a report of the microscopical examination of a removed portion :—

“Report of Specimen marked ‘N.’ received September 11, 1890.

“Structure (microscopic).—Superficially it is covered with stratified epithelium arranged in papillæ which contain blood-vessels; more deeply is dense fibrous and elastic tissue enclosing gland substance and ducts, similar to Weber’s glands of the tongue, and evidently albuminous from their granular character.

“Large veins and a plentiful supply of arteries with fairly thick coats. Some visceral muscle fibres are scattered about in bundles.

“No trace of any ‘nest’ formation nor any inflammatory ‘small cell’ tissue.

“Nature.—A papilloma, histologically innocent.

“Sketch enclosed.

“V. H. WYATT WINGRAVE.

“September 12, 1890.”

A week later the left vocal cord was quite normal in colour, and the left but slightly pink at the anterior commissure, and at the site of the growth described as second in my examination.

The child was then sent to Bournemouth, where I placed her under the care of my friend Dr. Davison. On visiting her about fourteen days after the clearance of the larynx, I was surprised to find that although wonderfully improved in general health, the voice of the child was reported as each day getting more husky, and on examining her I found both vocal cords highly inflamed, and the usual firm structure and glistening surface replaced by “raw-meat-like” flabbiness. I further learnt that the child was subject to paroxysmal and unreasonable fits of crying, that she every night woke affrighted, and always cleared the throat of a large accumulation of mucus, after which she would quickly fall asleep again. Searching further for a cause, Dr. Davison and I agreed that reflex irritation from the faucial inflammation, and possibly from adenoid growth, might reasonably account for both the laryngeal and cerebral symptoms. I therefore, under chloroform, removed as much of the tonsils as I could, which was indeed more than I expected, and passing my finger behind the soft palate, found a large mass of adenoids which was then and there cleared away by the finger nail.

From this time, and without other treatment than the wet compress and—for a few days—nasal douching, the larynx rapidly resumed its

normal appearance, and the voice its purity of tone. On and after the night of the operation the child slept peacefully and resumed her naturally happy disposition.

Six weeks later I was able to confirm Dr. Davison's reports of perfect health, and the child returned with her mother to Canada.

I have recounted this case in full detail because, while I would not dream of advancing the proposition that warty growths of the larynx are other than a rare result of adenoids, it appears to me that this case illustrates conclusively that there is an absolute etiological relation between adenoids and recurrent papillomata in children, and we all know that this tendency to recurrence is much more marked in children than in adults. Another case very similar, in a child somewhat older, first suggested the idea, nor need we seek far for a reason. All authors appear to agree with Morell Mackenzie that chronic congestion of the mucous membrane of the larynx—the most common cause of which is probably catarrh—is by far the most important etiological feature in the production of simple growths in the larynx. The same author dwells on the importance of prolonged irritation as an equally responsible factor.

It is clear, therefore, that adenoids, leading as they do to mouth-breathing, and a consequent abrogation of the respiratory functions of the nose, may in children be a most fruitful source of catarrh, hyperæmia, and irritation. This being granted, we may reason out our sequence by recognizing a disorder of either or all of these important systems, viz., the circulatory, nervous, or lymphatic.

DISCUSSION ON THESE THREE PAPERS.

The PRESIDENT said the multiplicity of the opinions regarding the exact nature of the complaint in Dr. Kendal Franks' case was rather amusing. Up to the present time there were not more than thirty cases of pure sarcoma of the tonsil on record in medical literature, most of them being cases of lympho-sarcoma.

Dr. WOLFENDEN said he did not think Mr. Browne had made out the exact connection between the adenoid vegetations and the condition of the vocal cords. He remembered a case which was interesting because papillomata occurred in three different places in the same patient—in the ear, on the uvula, and on the left vocal cord. He presumed that this must be due to some dyscrasic influence, and probably there was some such influence at work in young children who developed papillomata.

With regard to Dr. Franks' case, he asked whether it was necessary to perform such a severe operation.

In a case of lympho-sarcoma of the tonsil in his own practice he had removed nearly the whole of the tonsil by the cautery snare, and although he expected recurrence to take place very soon after the operation, it was now twelve months since the operation and no recurrence had taken place. He thought that many of these cases could very well be dealt with by means of the cautery snare.

With regard to Mr. Collier's paper, he thought he had been slaying the slain. The article to which he referred was only a review of the recent literature of the tonsil, and had reference principally to Retterer's embryological researches. He did not think that these researches were open to any criticism. He had the greatest respect for Prof. MacAlister's writings, but Retterer's researches did not lead him to propagate any such extravagant theory as Killian had thought fit to append to an otherwise valuable monograph upon the development of the tonsils in different

animals. This theory was to the effect that the pharyngeal tonsil had some phagocytic action in the destruction of bacilli, an extravagant assertion evidently borrowed from Metschnikoff.

The PRESIDENT asked whether the case mentioned was not described as one of primary sarcoma of the tonsil in the JOURNAL OF LARYNGOLOGY?

Dr. WOLFENDEN, in reply, said that this was the case. The first specimens examined under the microscope led him to believe that the tumour was an exceedingly small round-celled sarcoma, and this supported him in the view that it was unwise to rely upon examinations of small portions of a growth. Subsequent examination caused him to think that it was more probably a lympho-sarcoma, and he would remark that all microscopists knew how very difficult it often was to distinguish between small round-celled sarcomata and lympho-sarcomas.

Dr. DUNDAS GRANT observed that clearness of discussion would be facilitated in future by discussing each paper separately. To say that the pharyngeal tonsil was the cause of papilloma was at first sight rather startling. Was it more than one factor in a condition which gave rise to irritation of the larynx and the formation of neoplasms in that region? That was probably all that Mr. Browne wished them to believe. One very interesting feature of the case, which would have borne greater weight than he attached to it, were the attacks of dyspnoea, which occurred during the night. It was a favourite theory of Mr. Browne's, that in the condition of the pharyngeal tonsil might be found the cause for that spasmodic condition which he had described so carefully.

It was bearing these views in mind that he (Dr. Grant) had been enabled to afford considerable relief in the case of an infant suffering from spasmodic attacks of laryngeal stridor. With this idea he passed his finger into the small post-nasal space, and found it completely filled with adenoid growths. He removed them, and after that there was an unmistakeable improvement in the child's breathing. Whether there was a paretic palate hanging down, and irritating the terminations of the laryngeal nerves, he could not say. In any case, there was a sequence of events that admitted of no other explanation than that what he did was the cause of the improvement. Upon the same line he very frequently noticed that after manipulation of the larynx the patient had a kind of choking cough, a spasm of the larynx, and if the patient kept the mouth open the spasm would continue, but if by simple force of will one could induce the patient to *shut the mouth and take a few inspirations through the nose*, the stridor at once disappeared. This he had observed over and over again. It was doubtless a common observation, but it bore out the importance of looking for adenoid growths in such cases of spasm of the larynx. Their influence in the production of acute laryngitis was very evident. The case of lymphadenoma affecting the tonsils was an exquisite one. The diagnosis in fact did great credit to Dr. Franks, and helped him out of a difficulty. No doubt sufficient importance had not been attached to the enlargement of glands when the patient had been seen by other surgeons, and it was a very interesting question from a general point of view as to how far severe injury might have been the cause of a disease for which they had been unable hitherto to account, viz., lymphadenoma. Its occurrence in the tonsil was not at all surprising to those who, like himself, were imbued with the doctrine of the identity of the tonsillar tissue with that of lymphatic tissue elsewhere. It was natural, therefore, that the tonsils should share in the general enlargement. He was not surprised that Dr. Franks had been obliged to resort to tracheotomy. The extreme size of the tonsil, and the pre-existing difficulty of breathing, would probably have led one to perform that operation before attempting to remove such very large growths for

various reasons, as for instance, the possibility of severe hæmorrhage. He had under his care some time ago a very marked case of lympho-sarcoma of the tonsil, which he removed in its entirety by making a snip with the scissors through the mucous membrane, and then pushing his nail through the slit, beginning at the upper part. He managed to get the finger behind, and stripped it right out of the connective tissue base. He did this with the patient on the back, having performed tracheotomy, and inserted Hahn's canula to prevent any trickling of the blood into the air passages. When he got to the lower part where the greater part of the arterial supply reached it, he applied the wire of a cautery snare, and with the minimum amount of heat cut through it very slowly, and in this way he had the smallest possible amount of hæmorrhage. The operation was as such perfectly successful, but the growth subsequently extended down the larynx, and on to the base of the tongue: the case was not promising enough to justify further surgical interference, and the patient only lived about six months.

With regard to Mr. Collier's paper, he hoped that it was only preliminary to the further discussion of the question, with which few were better able to deal than Mr. Collier from his acquaintance with physiology and the original bent of his mind. He had hoped to hear something with reference to the phagocytic theory of Metschnikoff, to which physiologists seemed to attach so much importance. Personally he did not think it had been overthrown altogether by the very interesting review in the JOURNAL OF LARYNGOLOGY.

Sir MORELL MACKENZIE said it was characteristic of medical discussions generally, that the speakers wandered very considerably from the subject of the papers. Following the ordinary proceeding he proposed to make a few observations, though perhaps their direct bearing upon the papers that had been read was not very obvious. Beginning with the last, he said the paper was a very interesting one, and if the author accepted the view that Dr. Grant formulated for him, that it was a rare cause, he himself might be prepared to admit it in that capacity. They must remember that one disease was very common, and the other (papillomata) very rare. If adenoid growths were a frequent cause of papillomata, then the latter would be far more common than they were. In a limited sense adenoid growths might cause an irritation by the secretion falling down, and so ultimately lead to the formation of papillomata. With regard to Dr. Franks' paper, he said that in his own experience in regard to such cause in respect of cases the tonsils were large and growing rapidly. One in particular, in which the tonsils were enormous, was that of a medical man who had been operated upon several times before he (Sir Morell) had seen him. His previous experience had imbued the patient with a great objection to any further cutting operation, and he treated him by injections of acetic acid, using a curved needle specially made for the purpose. The result had been highly satisfactory. After a few applications the tonsils ceased to grow. He had never published the case, and although they knew that acetic acid had a very destructive effect upon growths of low vitality, and although the hope that he once entertained of using it with advantage in cases of cancer had not been realised, still in growths of low pathological form it was very useful. He remembered another case in which the effect was the same. At the same time he observed that lympho-sarcomas were rare. His other observation bore on a practical point, but had never been published. It was in reference to spasm of the glottis. Mr. Browne had given a very interesting description and very true to life. There was always a difficulty of doing anything while the spasm was on. Both the patient and friends were very alarmed. He had found that in adults as well as children there was simply an elongated uvula, the patient waking up and thinking he was going to be smothered. This might

happen once or twice a week ; in such cases a small piece might be snipped off and the patient cured. In other cases where the uvula was not enlarged it also occurred, and in these he found that a pinch of snuff did wonders by setting up a rival reflex. It might not be practicable to give chloroform during the paroxysm, but a patient could always take snuff. The spasm was thus relieved *instantly*.

Mr. LENNOX BROWNE called the attention of the Fellows to the title of his paper, in which he suggested that adenoid growths might be a *possible* etiological factor in the formation of papillomata. He went no further than this, and he was pleased to find that Dr. Grant and Sir Morell Mackenzie agreed with him, that it was worth while to suggest a search as to the condition of the pharyngeal tonsil in the case of laryngeal growths in young children. He admitted that naso-pharyngeal hypertrophies were fashionable just now almost as much as those of the anterior parts of the nares. Still there could be no doubt that in the two cases he had mentioned they were not altogether foreign to the growths in the larynx, for when treated and removed the tendency to laryngeal recurrence had quickly subsided. As to the question of the reflexes he could not go into that as fully as he would have wished, but he might call the recollection of Fellows to the fact that he had some months ago drawn attention to the connection between adenoid enlargement and *laryngismus stridulus*. Many of them had probably seen in the weekly abstract of the "British Medical Journal" Flatau's account of the relationship between the lymphatics of the nose to the sub-arachnoid space and the meninges of the brain, and he suggested that in this connection was to be found an explanation of the stupidity—the aprosexia of Guye of Amsterdam—of children who suffered from adenoid growths, as well as from spasm of the glottis ; and it was not difficult to see how a pinch of snuff might relieve the spasm. He pointed out also, with regard to Dr. Wolfenden's remarks on the interesting case of Dr. Franks, that with the cautery snare it was practically impossible to remove the whole of the tonsil unless they got behind it as Dr. Franks and Dr. Grant had done in their operations. He agreed with Dr. Grant that they would have liked to hear more of Mr. Collier's paper. With regard to the presence of tonsillar structure in the recesses, an instance might have been given of its existence in the ventricle—the laryngeal tonsil ; and as another that in the Eustachian tube—the tubal tonsil. From a clinical point of view the paper was interesting, and it might be mentioned that in intestinal diphtheria, two cases of which he had seen, the diphtheria was limited to Peyer's patches. In one instance he had witnessed the autopsy, which had made a great impression upon him.

He asked Dr. Franks whether his patient was a temperate man, because he himself had met with exactly similar conditions in a publican many years ago, in which there had been previous operations for general lympho-sarcoma. He removed it with the wire *érasneur* first advocated by Mackenzie, and there was very speedy recurrence.

Mr. KENDAL FRANKS said that before replying to the observations on his own paper, he would like to say something with reference to the occurrence of dyspnoea in connection with adenoid growths in the naso-pharynx. He had observed it for a long time, and he had noticed the connection in a great number of cases. The first case which had impressed this upon his attention was that of a child who had an attack of what was called "croup." The patient was a girl ten years of age, and on a very cold frosty night he had to drive seven miles into the country to see her, so that he was not likely to forget it. He had taken his tracheotomy instruments with him, and sat there all night in the expectation of having to use them. The spasm relaxed for awhile and then recurred. He ascertained that these attacks were very frequent, and subsequently she had several more of

them. When she had recovered sufficiently to come to his house he had examined her with them in error, and found the pharynx and naso-pharynx studded with enlarged follicles and adenoid growths. He removed these, and from that time the patient had no more of the dyspnœal attacks. That case made him look out for these adenoid growths as a possible cause of laryngeal spasm, and since then he had had several cases in which the removal of the growths had been followed by relief. Referring to his own paper, he defended the operation as being not unnecessarily severe, on the ground that in lymphadenoma it was necessary not to leave any part of the lymphatic tissue behind. That was his reason for enucleating instead of dividing the tonsil. He thought that this view was borne out by Mr. Browne's case, in which recurrence took place. It was absolutely necessary to do something in this case, for the man was in great suffering from dyspnœa as well as from dysphagia. He agreed with Dr. Grant that it would have been wiser to have performed the tracheotomy first instead of during the operation, but he had hoped to be enabled to remove the growths without opening the trachea. He did not think that enucleating the tonsil was more severe than taking off a slice, for the latter left a larger raw surface. In fact he thought that enucleation might advantageously be more frequently resorted to. He said that in cases of diseased tonsils where the crypts extended to a great depth, and where there was much cheesy matter, simple excision did very little good, as the crypts had to be destroyed with the cautery afterwards, and in these cases it would be far more satisfactory to enucleate forthwith. When the tonsil was simply hypertrophied then excision in the ordinary way would do.

Mr. MAYO COLLIER said that after the remarks of Dr. Grant and Mr. Browne, he supposed he owed the Society an apology for inviting them to a feast of reason and stopping short at the first course. He observed, however, that he had been very particular in giving a title to his paper, to avoid giving the impression that he was going to introduce any theories on the subject. His object was simply to divest the subject of theory and obscurity, and to point out that the lymphoid tissue was arranged quite differently in the whole alimentary tract as compared with the rest of the body. He had simply quoted Dr. MacAlister as giving the latest definition of the structure of a lymphatic gland.

The Association then adjourned until the evening.

Mr. LENNOX BROWNE read a paper upon *A Case of Unrecognised Impaction of Artificial Teeth for twenty-two months, with successful removal.* (Recommended by Dr. Porter, of Helmsley, in Yorkshire.) The patient was a lady, about thirty-five years of age, 5 feet 8 inches in height, but weighing only ninety-eight pounds. In fact she was dreadfully emaciated. It had been considered by two gentlemen, who had used the laryngoscope, to be merely a question of diagnosis between cancer of the larynx and laryngeal phthisis, but, as afterwards appeared, Dr. Porter had had a suspicion of the true nature of the case, which in view of the other opinions had not, unfortunately, been acted upon. On looking down the throat with the mirror, Mr. Lennox Browne was at once led to say that the patient wore false teeth, for he saw impacted across the larynx, fixed in each hyoid fossa, what he diagnosed to be a plate of artificial teeth. It divided the larynx into two, as shown on the sketch made at the time, and now passed round (Fig. 1). She happened to come at the moment when his anæsthetist was there, and he also had the advantage of the presence of Dr. Hillies, of Dublin, a member of their Association. Chloroform was given for the purpose of allaying spasm, but not to insensibility,

and taking a pair of rectangular forceps he lifted the teeth up on the left side ; this was followed by a violent paroxysm of dyspnœa, and tracheotomy instruments were placed in readiness. However, on pushing the



FIG. 1.

chloroform a little, he was enabled to withdraw the foreign body (Fig. 2) by his finger passed far down. One tooth was displaced in the attempt, but, fortunately, was coughed up immediately afterwards.

Up to the time of the operation he had no history of anything pointing to the nature of the case, but he then ascertained that the patient awoke one morning, about twenty-two months previously, with vomiting and dyspnœa, which persisted for thirty-six hours. When she recovered somewhat she inquired after her teeth, but as they could not be found, it was assumed that they had fallen into the vomited matter and had been thrown away. Up to the time of the operation it had never occurred to anybody, except as noted above, that the cause of the dyspnœa was the presence of this plate of artificial teeth in the larynx. The afternoon following the operation the

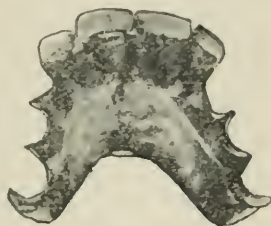


FIG. 2.
(From a photograph, exact size.)

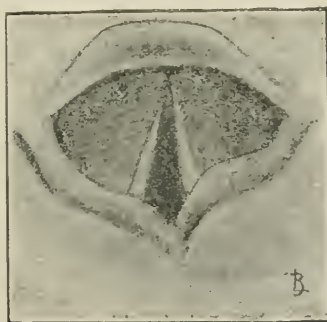


FIG. 3.

patient had an epileptic fit, and he then learnt, for the first time, that she was subject to them. It was therefore probable that the accident had occurred during a fit while sleeping. The after treatment consisted merely in the application of the cold coil. There was naturally some traumatic perichondritis which impeded the left vocal cord (Fig. 3), and, in addition,

there was infiltration at the left base of the lung. For the first week she made no progress. Six weeks after the removal of the plate, however, she had gained twenty-three pounds in weight and was practically well. A fortnight after the operation she had gone to Bournemouth, where she had been under the able care of Dr. Davison, and Mr. Browne attributed much of the rapidity of the improvement to the climate of that favoured health resort. This patient had been examined laryngoscopically by four gentlemen, and he ventured to think that it pointed the moral that it was not everybody who used a scientific instrument of precision who was able to give precise information as to what he saw through it. He thought that the case was unique in the fact of the presence of the teeth for such a long period of time unrecognised.

DISCUSSION ON MR. BROWNE'S PAPER.

Dr. DUNDAS GRANT said the case was very interesting as compared with one published some years ago. The teeth were there, yet the patient had no idea of it. In another case the patient was convinced that he had swallowed his teeth, and the pain was distinctly localized in the back of his throat. Examination revealed that no teeth were present in that position, and the patient was told that if really he had swallowed the teeth, they must be in his stomach. Thereupon the pain promptly transferred itself to the stomach. Two days later the teeth were fortunately discovered under the sofa, and the patient's mind was set at rest.

Mr. KENDAL FRANKS said the first case he remembered of the kind was one under the care of their late president, Mr. Smyly. The case had been diagnosed as one of either cancer or phthisis. He had looked down the throat, and had removed a large piece of bacon from the back of the throat, to the patient's great relief. The second case was one he had seen himself, and it showed the importance of using the laryngoscope. The patient was taking some soup, and as he was sipping it something from the soup "flew down his throat" and stopped there. He ran upstairs and put the handle of a tooth-brush down his throat to remove the obstruction, and this failing to remove it, he made a loop of a boot-lace, and swallowed the loop, drawing it up again. All these efforts, however, failed, and he consulted a medical man, who passed a probang, but failed to detect anything with it. The patient was not satisfied with the diagnosis, and so his medical man passed the probang for two or three weeks daily, but always without finding anything. At last he made up his mind to go and see a specialist. When he was brought to see him (Mr. Franks) he saw firmly impacted in the larynx what looked like the splinter of a chicken bone, wedged between the left arytenoid cartilage behind and the thyroid cartilage in front. He seized hold of it with the forceps, but no effort would dislodge it. He tried again a second time, but after the first effort the larynx became so irritable that he could not even get to see it. He put a student to watch over the case, and promised to operate in the morning. He was brought into the theatre and was put under chloroform, when suddenly he had a violent attack of spasmodic cough and sat bolt upright on the couch. He got cyanosed and during a second paroxysm of coughing he coughed up the bone, for the removal of which they were about to operate. It was triangular in shape, each side of the triangle measuring over $1\frac{1}{4}$ inches, and evidently was part of the chicken's breast bone. The specimen was at present in the museum of the Royal College of Surgeons in Dublin. It was somewhat extraordinary that this piece of bone should have been in that position for twenty-three days without being got rid of, and without setting up more marked irritation.

Sir MORELL MACKENZIE said the case related by Dr. Kendal Franks reminded him of that one in which a piece of bone from a sheep was impacted in the larynx for many months. It was impacted in such a way that, being of an irregular triangular shape, each side of it was in the ventricle of the larynx, so that it was quite impossible to do anything with it. Sir William Fergusson proposed tracheotomy, but, as the symptoms were not urgent, Sir Morell preferred to try other ways of getting it out from the front. He did not know at the time how much there was in the larynx. He had made a specially designed probe, which he managed to pass underneath the bone, and so prized it up. Ultimately the operation proved quite successful, except that a little piece broke off, and fell down the trachea, but, fortunately, it was coughed up in a minute or so. The bone was exhibited at the Pathological Society. It was very difficult to understand how the one referred to by Dr. Franks could have remained so long in that vertical position in the larynx. He then went on to say they all were aware how often people imagined that bones have stuck in their throat. There was a case, which had been reported by Sir James Paget, in which a plate of teeth was supposed to have been there for some months. Several surgeons had felt it quite distinctly with their instruments, and physicians had heard it move with their stethoscopes. The patient was in a miserable condition, and went on in this state for a long time. Everybody thought he would die; but about eleven weeks after the supposed accident a servant found the teeth, which had been carefully put away in a drawer, and had not been swallowed at all. He remembered another case some years ago. The patient called him up late at night, just when he was in his first sleep, and he resented it. He was, however, ultimately induced to go down and see the man, who told him he had something in his ear. He had seen three or four doctors, who had all told him that there was really something in his ear, and that unless it was taken out he would certainly die. Blood was trickling from his ear, and he said that in performing some tricks to amuse the children he had put the bead into his ear. He was in great pain. Sir Morell examined the ear, and to his surprise there was no foreign body in the ear. There was some blood in the external auditory canal, and the tympanum appeared to have been injured. The patient did not seem to be satisfied. The next morning, however, a message was sent, to the effect that the bead had been found on the mantelpiece, and that it had never been in the ear!

Dr. HUNTER MACKENZIE read a paper entitled *Progressive Immobility of a Vocal Cord, and its value in diagnosis*. As a contribution to the diagnostic study of certain diseases of the larynx, and in the view of eliciting your valuable opinions thereon, I propose this evening to bring briefly under your notice a peculiarity in some movements inside the larynx which I believe to be characteristic of, and confined to, grave diseases originating on or in a vocal cord. The peculiarity to which I have referred I have termed "progressive immobility of a vocal cord."

I have on previous occasions made reference to the presence, and to the importance in diagnosis, of immobility of a vocal cord in cases of cancer of the larynx.^{1 2} Semon³ had, however, anticipated me in this, and Lennox Browne, in his excellent treatise,⁴ refers to paralysis or immo-

¹ "Edinburgh Med. Journ.," Dec., 1887.

² *Ibid.*, July, 1890.

³ Heath's Dictionary of Practical Surgery, Vol. I., p. 895. 1886.

⁴ The Throat and Nose and their Diseases. 3rd Edit., p. 478. 1890.

bility of the vocal cord as being an almost invariable symptom of cancer. Other observers, in their clinical records of cancer, have alluded to its presence, but apparently in a merely casual manner; but the terms "impaired mobility," "paresis or paralysis," and "absence of freedom in movement," which are all that any observer has hitherto employed in reference to this symptom, are not sufficiently descriptive, and are, in fact, apt to be misleading.

You will pardon my re-stating the elementary fact that there are two kinds of movements of the vocal cords—the involuntary and the voluntary. These are sometimes designated as the movements of respiration and those of phonation, although the former are very irregular and are not synchronous with the movements of the chest walls in respiration. Now the impaired mobility present in grave organic disease of the larynx commencing on or in the vocal cord is peculiar in these respects, that in the very early stages it is manifested in connection with the involuntary or respiratory movements only, the voluntary or phonatory movements meanwhile remaining normal. Gradually, however, these also become impaired, until a stage is reached when the vocal cord becomes quite fixed alike in regard to respiration and phonation. The impairment in mobility of the vocal cord is thus essentially progressive in character both in degree and variety.

The next point is as to the nature of the lesions in the early stages of which this progressive immobility is present. It is met with in cancer originating in the vocal cords, and as it was in connection with this disease that I first had an opportunity of studying its development, it occurred to me that its presence might be of some value in the diagnosis of this malady in its early stage. I have already recorded my opinion to this effect.¹ Recently, however, I have met with a case which controverts this view.

John Smith, aged forty years, army pensioner, attended at the Eye, Ear, and Throat Infirmary, Edinburgh, for the first time on 15th March, 1889. He complained of hoarseness of about one year's duration. He had a chancre about twelve years ago, and has twice had an attack of respiratory hæmorrhage, the first being about twelve years previously. The left vocal cord was reddened, with a pin-head ulceration on the posterior third of its free edge, and a small swelling about twice the size of a pin-head on the corresponding arytenoid cartilage, just about the situation of the processus vocalis. The respiratory (involuntary) movement of this vocal cord was impaired, but to such a slight degree as only to be detected by careful observation and comparison with its fellow. Chest apparently normal. 23rd July.—Had severe respiratory hæmorrhage about a month ago. Extension of ulcer on posterior third of left vocal cord. Since last report the respiratory immobility has become more marked, and now it is observed that on phonation the left vocal cord does not move so freely as its fellow. Iodide of potassium in large doses has produced no effect. 30th Sept.—Has now a husky, aphonic cough, with occasional left ear-ache, and no pain or difficulty in swallowing. The respiratory immobility of the left vocal cord is now absolute; well-marked

¹ "Edin. Med. Journal," July, 1890.

partial phonatory immobility is also present. The ulceration has extended over nearly the whole of the left vocal cord. There are medium swelling and infiltration of the left arytenoid cartilage, with thickening of the left ary-epiglottic fold.

This case was one of tubercular disease (tubercle bacilli in the tissues), although the laryngoscopic characters, it will be noted, were decidedly different from those usually met with, especially in regard to the well-marked localized unilateral nature of the affection. Here, then, was a case of tubercular disease in which this progressive immobility of the vocal cord was present.

Are grave lesions of the larynx commencing in a vocal cord always accompanied in their early stage by progressive immobility, and what is the negative value of the symptom? I am well aware that cases of cancer of the vocal cord have been recorded in which, in the early stage, its action has been described as normal, or in which it has been described as "moving freely" (Butlin¹); but in such instances the observer may have tested the phonatory mobility only, or, as Semon has aptly pointed out, and illustrated by a case², the apparent origin of the disease may have been a vocal cord, whilst its actual commencement may have been in a ventricle. It is frequently very difficult to distinguish by the laryngoscope between these two starting-points, and in early ventricular cancer this immobility would not be present.

The thesis I wish to submit is that if, in the case of an affection of a vocal cord, be it thickening, ulceration, or a distinct growth, the mobility of the vocal cord is gradually impaired, firstly in its respiratory, and secondly in its phonatory aspects, a grave lesion is present. Conversely, if in a case with somewhat similar laryngoscopic characters the phonatory, but more especially the respiratory mobility be normal, the lesion is comparatively insignificant. As illustrating the negative value of the symptom, I may mention the case of an elderly gentleman who was sent to me by Dr. Struthers, of Leith. His left vocal cord presented certain suspicious appearances; it was red, and slightly thickened, especially about its middle third, where a pin-head sized yellowish-white conical projection ultimately developed, and slowly increased in dimensions, with a tendency to break down. The affected cord maintained perfect respiratory and phonatory mobility. The remainder of the larynx was normal. Local treatment was ineffectual. The patient, after an interval, returned with a large ulcer on the retro-pharyngeal wall, whilst the cord remained as already described. Under large doses of the iodide of potassium, not only did the pharyngeal ulcer rapidly heal, but the growth on the vocal cord completely disappeared. I am inclined to believe that here I had to deal with that rare condition—a gumma of the vocal cord. As already stated, the disease had some suspicious appearances, but the perfect respiratory and phonatory mobility maintained throughout by the affected cord was to me an important factor in the formation of the favourable prognosis which was given.

This case would tend to show that progressive immobility is not

¹ Transactions of the Clinical Society of London, Vol. xx., p. 56.

² *Ibid.*, p. 48.

present in syphilis of the vocal cord. Whether it is developed in diseases other than cancer and tubercle has yet to be determined. I have not met with it in any other complaint.

As to the immediate cause of this progressive immobility of a vocal cord, little need be said. It is undoubtedly owing to infiltration of the deep structures and muscles by the new growth or deposit, and hence must be considered myopathic in character.

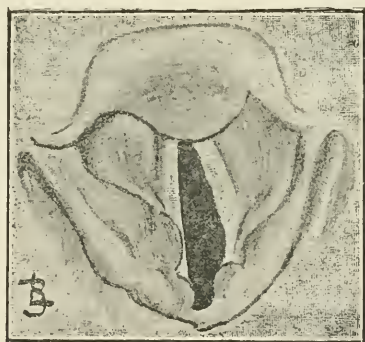
Mr. LENNOX BROWNE read a paper upon *A Case of Persistent Immobility of the Right Vocal Cord after Complete Recovery from an Attack of Hemiplegia*. Wm. C., aged forty-two, a clerk, who has occupied himself much with singing, applied at the Central London Throat and Ear Hospital on June 13th.

When aged fourteen, had scarlet fever, which was followed by an abscess in the left side of the neck (scar still visible about two inches below the angle of the jaw); the voice was not in the least affected. No history of syphilis obtainable on most searching examination. Till one year and nine months ago was quite well.

Present Illness commenced at above date. When out walking on a cold wet day patient experienced a feeling of intense cold along the right side of the face and neck, with loss of tactile, but not of temperature, sensation.

Four weeks later the right shoulder, arm, and side of the body were similarly affected, there being in addition great feebleness of muscles, but not absolute paralysis. Voice then became "woolly."

A week later he lost the use of his right arm, and could not write or carry out any complicated movements. There were no twitchings or convulsions, but considerable pain was felt in the right shoulder and neck. He described his sensation as if the whole of the right side were en-



veloped in cast iron, the lower limit at rib-margin being marked by a tight girdle. The right leg was also weak and gave way under him, but did not present the same phenomena as the arm. Hearing was not affected, but he saw double. He gradually improved till the present date.

Family History.—Father died of phthisis, aged forty-three ; mother living, aged seventy, and healthy. Is married and has five children living and healthy. Wife has had no miscarriages.

State on Admission.—Complains of “disturbance” of voice, which has not recovered since the first attack twenty-one months ago. Voice broken, hoarse, polyphonic ; cannot produce high notes, which used to come with ease. Articulation perfect. Deglutition normal. Cough slight, hacking, and unproductive. Right arm and hand colder than the left, much weaker, fingers crooked, cannot hold pen naturally, which is grasped between proximal phalanx of index and middle fingers. Tactile sensation is diminished, temperature sensation is normal. Legs normal. Sight and hearing normal.

Larynx.—The right cord is immovably fixed almost in the median line, and is but very slightly curved. At first sight the ary-epiglottic fold and the arytenoid cartilages appear to be swollen, but on careful examination it is seen that these conditions are due simply to distortion.

It is, of course, a question of great interest whether this distortion is attributable to cicatricial contractions following the abscess in the neck when aged fourteen, or whether it has any direct connection with the hemiplegia. My bias is towards the latter view, because vocal disability and subjective sensations date only from commencement of the hemiplegic phenomena.

In support of this contention may be advanced the facts that the paralytic symptoms were not confined to the leg, but were even more marked and of longer persistence in the upper extremity, and that disturbance of voice and speech is a not uncommon attendant of right hemiplegia.

The question of perichondritis may be dismissed, because although there was some history of taking cold, which might support such a view, the entire absence of pain and respiratory distress nullify an inflammatory origin, nor is there reasonable ground for assuming the influence of rheumatic, syphilitic, gouty, or even tuberculous dyscrasia. As against any pressure on the recurrent is the circumstance that the affected vocal cord is adducted much more closely to the median line than is usual in such a case, where the cadaveric position is the usual rule. The facial muscles being first affected would also be suggestive that the primary lesion was central.

Dr. DUNDAS GRANT read *A Case of Growth on one Vocal Cord, with Operation*. The patient was a man, aged fifty, with no personal or family history of importance. At Christmas, 1889, a slight cold was followed by hoarseness, which persisted and increased until the voice was completely lost. No difficulty in breathing or swallowing was noticed, nor were there any night sweats. He had lost fourteen pounds in weight in five months. On examination, the right vocal cord was seen to be replaced by a nodular mass, pale pink in colour, involving the ventricular band. It projected across the middle line during phonation, and appeared to extend down the glottis. Right cord congested, but moved well. A thickened gland was felt behind the angle of the left lower jaw. A portion

of the growth having been removed, was found to consist of well-marked cell nest formation of stratified epithelium. On August 27th Dr. Grant performed tracheotomy, using Hahn's canula. He then cut down and divided the thyroid cartilage. The growth was found to be more extensive than had been suspected, and it was deemed necessary to remove the whole of the interior of the larynx by means of raspatory and blunt-pointed scissors, care being taken to preserve intact the laryngo-pharyngeal orifice. The hæmorrhage during the operation was very slight. A drainage tube was inserted, and the edges of the wound approximated by sutures. The patient was under chloroform two-and-a-half hours, but bore it very well. He made an uninterrupted recovery, and on September 19th he was able to go out for a walk. The growth proved to be epitheliomatous.

DISCUSSION.

The PRESIDENT said he too had treated a patient in the same way, but the disease had recurred six months later, occurring on the thyroid, and resulting in giving rise to a fungating mass the size of a child's head. He warned them of the probability of recurrence.

Dr. ORWIN said the case just related by the President reminded him of one he had seen some years ago which had been diagnosed as malignant disease of the larynx. There was swelling in the ventricle. He consulted with his colleagues, and they agreed with him that the laryngeal appearances were those of malignant disease. One symptom was the almost complete immobility of the left vocal cord. He removed one-half of the larynx, and the patient did well for a week, and then died from pneumonia. Microscopically the growth was found to be tubercular. There was, however, no indication whatever of this patient suffering from this disease before death, but caseous and calcareous deposits were found in the left apex.

Dr. STOKER recalled a case which he had shown at the last meeting of the Association, that of a woman with a black tongue. She had syphilitic ulceration of the larynx, and also left hemiplegia. For many months this patient had absolute immobility of the left vocal cord, not only in respiration, but in phonation. He did not think that the hemiplegia had anything to do with it, but she was treated with anti-syphilitic remedies, and after a few months she recovered. It was some time after that she developed the "black tongue."

Sir MORELL MACKENZIE said it was an interesting fact that there was at times a kind of respiratory paralysis of the cords before anything was noticed in voluntary movement. He had noticed that himself, though he had not attached much importance to it. He thought that their President had done the Society a service in calling attention to the diagnostic importance of this condition, and he thought further deductions might be drawn from it. As regarded the view as to paralysis being a sign of important organic changes, he observed that he had been unable to make out exactly what the author's views were on the subject. Personally, he did not attach a great importance to this immobility in cases of cancer. It was largely the effect of accidental circumstances. He had seen the immobility come on after exposure to cold, and last several months. He thought that the author had not insisted enough on the results of pressure upon the recurrent nerve which might result from pressure of enlarged glands in phthisis, etc.

Dr. MACINTYRE mentioned a case of doubtful nature, in which this gradually developing immobility was present, which had given him a great deal of anxiety.

The patient came to London, and got a variety of opinions, one man thinking it was a case of incipient cancer, and suggested extirpation. He subsequently obtained several other opinions. By this time both cords were affected, and it was suggested that the whole of the larynx should be removed. The patient refused, and two years later he had again come under his (Dr. MacIntyre's) observation, and it was quite evident then that the case was one of cancer. He performed tracheotomy with great relief to the patient. He had been much impressed by the progressive immobility, which was one of the early symptoms. Unfortunately, however, for its diagnostic value, he had met with two cases of progressive immobility of the cord in which recovery had taken place, and in whom there was no evidence of any constitutional condition. In one case of this kind they had recently found evidence of tuberculosis. His mind, therefore, was not made up on this point.

The PRESIDENT asked whether in the cases alluded to it had gone on to complete immobility?

Dr. MACINTYRE said that in one case it did, but not in the other.

Sir MORELL MACKENZIE pointed out that it was exceedingly rare to find any paralysis of the cords in cases of hemiplegia. Many years ago he had examined a large number of persons suffering from hemiplegia without finding a single instance.

Mr. BROWNE said it was on that account that he had brought the case forward.

Dr. WOLFENDEN insisted upon the desirability of working out the pathology of those cases of hemiplegia in which the movements of the vocal cords were affected, and suggested that a committee of this Association should be formed for the purpose of minutely examining the brain and spinal cord of patients who had died with these conditions. The Fellows of the Association who met with such cases and obtained autopsies would, no doubt, gladly furnish specimens for such an examination, which could not fail to be of the greatest scientific value.

The PRESIDENT, in reply, said that his remarks only applied to cases of *progressive* immobility of the cords. He had purposely omitted any allusion to the effects of enlarged glands. Not only did the glands often become enlarged, but frequently they were only detected *post-mortem*. Pressure might thus be caused by enlarged glands not to be detected during life. Dr. MacIntyre's case which recovered was certainly unique as far as he knew. He had been watching this symptom for some years, and he had never seen a case of progressive immobility such as he had described which did not prove to be due to some grave organic disease.

The PRESIDENT alluded to the etiology of abscess of the antrum, exhibiting a case, and said that in only one case out of thirty of abscess of the antrum had the cause been other than decayed teeth. He insisted upon the importance of scraping the antrum well out, and this was only possible with a large tube. Having diagnosed the complaint, the treatment was to pierce the alveolus, scraping it out and washing it with iodine water after applying cocaine to allay the pain to which the application of iodine gave rise in the nose. He mentioned the case of a patient who was operated upon in this way three months ago, and had now practically recovered. His experience of these cases was that a discharge of pus always took place so long as the tube was left in, probably owing to irritation directly due to its presence.

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Mr. LENNOX BROWNE said he had had an experience of over fifty cases of empyema of the antrum, in only one of which was it due to anything but decayed teeth. In this case the patient had polypus of the antrum. He also practised scraping out the antrum. He did not believe that leaving the tube in necessarily caused the discharge of pus to continue. He instructed patients to retain the tube until the fluid came away quite clear after irrigation, and then its use was cautiously abandoned.

There was an interesting show of surgical instruments, and some fine microscopic sections by Mr. WYATT WINGRAVE, Pathologist of the Central Throat and Ear Hospital, the specimens having been taken mainly from patients in that institution.

The Society adjourned.

NOTES.

Owing to the Report of the Meeting of the British Laryngological Association and other matter, abstracts have this month been crowded out.

The Index for 1890 will be forwarded to all subscribers as soon as possible.

Exchange Journals are requested to address to care of F. A. DAVIS, 40, Berners Street, London, W.

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ON THE USE OF ELECTRICITY IN DISEASES
OF THE THROAT.

By JOHN MACINTYRE, M.B., C.M., Glasgow.

IN all branches of medicine and surgery the use of electricity, in one form or another, is becoming more frequent, and laryngeal surgery proves no exception to the rule. A glance at the text-books in use will convince anyone that this agent is so frequently used, and in such serious conditions, that everyone making use of it should understand the principles upon which the treatment is founded. In this paper we have been led to recall some of the more important, although probably well-known principles, because, now and again, it is evident from the writings of some authors that not only is it difficult to understand what they mean by the currents used, but the description of these currents is quite insufficient to enable another to repeat their experiments. We will, therefore, firstly, refer to the physical laws which bear upon the subject, with a special view to the currents required in our department. We will next refer briefly to the apparatus which interests us, and thirdly, we will say something about the application of electricity in several affections of the throat and nose.

Electricity, however difficult to define, is made manifest to us in the forms of heat, light, chemical and physiological actions. No definition has yet been received with anything like satisfaction by physicists, but

if we cannot definitely say what electricity is, we know sufficient of the laws concerning it to place a thoroughly reliable agent in our hands, if properly understood ; but, on the other hand, a powerful agent for evil if it be imperfectly understood. It is customary with some writers to begin by describing the form of the elements used in a given case, and so one author speaks of the Bunsen, a second recommends a Daniel, and a third will have nothing but a Leclanché element. Suppose, instead of this, we look at the subject from a wholly different standpoint, viz., that of the various ways in which electricity can be produced, and let us select the generator, because of its suitability for a given piece of work. It is evident, in these days of dynamos, that as long as we get a current of electricity of a given strength it matters little from whence it is obtained. The best possible example of this is the admirable supply got recently from the companies for lighting the houses in the Metropolis. But, as others are less favourably situated, we have to fall back upon some of the ordinary means at our disposal for its production.

Electricity may be produced by friction, say by the well-known action of rubbing a piece of amber with a piece of flannel, and, on the same principle, friction produces it in such complicated apparatus as the Voss and Winter machines. These machines are used to a limited extent in medicine for the treatment of hysterical and other nervous affections, and they are spoken of as machines for the production of static electricity. Secondly, we make use of a number of chemical batteries to produce electricity, and of these we have an infinite variety. Thirdly, we have the dynamo, and from it secondary batteries, or accumulators ; and, lastly, the thermopile. To the consideration of these points we will now direct our attention, and in order to do this it is necessary that we should explain two states in which electricity is known, called respectively the static and dynamic, although they are but two phases of the same force, acting under different circumstances. By static electricity we mean electricity in a state of rest ; dynamic refers to it in a state of motion, or rather what we suppose to be a state of motion. The former, as we have said, constitutes what is known as static, and it is also called Franklinic electricity. Some writers, such as Dr. Tibbits, have found the static form of use in hysterical cases, but as yet no one has paid much attention to its use in throat affections, and hence we need not refer further to it. It is just possible that in hysterical affections of the throat it might be found useful, and if anyone wish to experiment, the Carré, Winhurst, Winter, Holt, and Voss machines are the best at present at our disposal.

Passing to the consideration of dynamic electricity, three terms now in common use must be made clear. These are (1) electro-motive force, written E.M.F. ; (2) current, written C. ; and (3) resistance, written R. Without a knowledge of these terms, it is impossible to understand what is meant by a current, or its measurements ; and further, unless we understand these, it will be impossible to correct errors in the construction of apparatus, or devise new instruments correctly. To give a familiar example of the use of these terms, we might compare it with the flow of water through a pipe. Given a tank of water and a pipe leading from it

to a lower level, the water flows down the pipe because the pressure above any point is greater than that at any point below it. The pressure is at its maximum at the inlet, and falls to zero at the outlet. Further, a certain quantity of water flows per minute, depending upon the friction and upon the flow of water in the pipe. Three ideas are clearly to be understood here—firstly, the pressure producing the flow; secondly, the rate of flow, or the current; thirdly, the friction or resistance opposing the current. To compare these with the electrical phenomena, the E.M.F. is likened to the aqua-motive force, or water pressure, or gravitation. The current is comparable with the rate of the flow through the pipe, and the friction to the resistance which all bodies more or less offer to the passage of the current. The above factors in the calculations are measured in authorized units established by the British Association.

The E.M.F. has for its unit the volt. The current is measured in amperes, or fractions of an ampère (say milliampères), and the resistance is measured in ohms. The relation between the various units was first worked out by Dr. Ohm, and he formulated the law $C = \frac{E.M.F.}{R}$, and as there is a resistance inside the battery as well as in the wires forming the outer circuit, the law is further amplified into $C = \frac{E.M.F.}{R + R'}$. From a practical point of view it is not necessary for us to study any of these beyond the current itself, but a knowledge of the principle by which the current is measured is necessary, if we wish to understand why we choose a particular battery or generator, or to describe accurately what we have done, that others may repeat the treatment. Let us consider here what bearing this law has in our practice. If we wish to stimulate a nerve or muscle in the throat by passing a constant current through the tissues of the body, say from the hand to the side of the neck, then it is evident the force which we wish to have at our disposal must be such as to overcome the great resistance of the human body between these points. In other words, we require a high E.M.F., possibly thirty to forty volts, but a very small current, a fraction of an ampère, say five to ten milliampères only, is necessary. If we wish to light a lamp, the resistance of the small piece of carbon within the globe is nothing compared with the resistance of the tissues of the body in the last-mentioned case, and so we do not require a high E.M.F. Instead of thirty volts, five will do, but we require a stronger current, probably two to three amperes. Thirdly, suppose we wish to heat a piece of platinum for a cautery point, the small piece of platinum offers little or no resistance to the current, and so a low E.M.F., say four volts, is all that is necessary; but, on the other hand, to gain the necessary heat we may require as many as thirty amperes of current. It may be here stated that this demand for a high E.M.F. and low current at one time, and a low E.M.F. and a high current at another, constitutes the chief difficulty in supplying medical men with batteries, because, as yet, there is no universal battery, and so it comes about that one form of battery or generator is chosen for one kind of work, and another for another.

The following table may be useful in choosing a battery for throat work, and, as it covers the whole range required, anyone by its use can

let an electrician understand what is wanted, and the choice of the means of producing the currents becomes a matter of expense and convenience only.

TABLE OF CURRENTS WHICH MAY BE REQUIRED IN THE TREATMENT OF AFFECTIONS OF THE THROAT AND NOSE.

	E.M.F.	CURRENT.
Diagnosis and treatment of lesions of nerves and muscles	1—60 volts	1—20 milliampères
Removal of nævi, cysts, &c.	20—40 volts	1—30 „
Lighting of these cavities	5—20 volts	1—3 ampères
Heating cautery points, loops, &c.	5 volts	20 „

If we can have the supply from mains on the street otherwise used for lighting purposes, it becomes an easy matter to arrange any current. But suppose we have to fall back upon chemical generators, how can we arrange the batteries so as to get the difference in pressure? We must remember that, given a store of electricity in a cell, it can be taken out in either form. If we wish a battery with a small current and high E.M.F., we take a number of cells and join them end to end; that is, we join the carbons to the zincs, or the positive to the negative poles. By this means we get the sum of the electro-motive forces, but only the current of a single cell. The arrangement is spoken of as putting up the cells in series. If, on the other hand, we connect the carbons together, and all the zincs together, we get an increase of current corresponding to the sum of the currents, but the E.M.F. is only that of one cell. To exemplify this: if we start with ten cells of the capacity of one volt and one ampère current, arranged in series, we can have a battery of ten volts, but only one ampère; if in parallel, they would give ten ampères of current, but only one volt.

Understanding the above principles, it is easy to choose a cell for any purpose. For the stimulation of a muscle or a nerve, or electrolysis in nævi, cysts, &c., the ordinary Leclanché cells are excellent. They are clean, compact, non-fuming, have no local action when not in use, and require little attention. The disadvantage is, the current rapidly falls owing to the internal resistance in the cell, and, as the current is small at the best, they are useless for a cautery. The bichromate of potash has many forms, nearly all of them badly designed. Its advantages are: powerful current, cheap material, and non-fuming. Its disadvantage is that the cells do not last long; in many cases this is owing to the carbon splitting up, or the acids corroding the zincs, especially when we get to a terminal. There are many other forms of cells now in the market, the Bunsen, Daniel, and chloride of silver, but nearly all of the last mentioned have been proved useless instruments, although those recently put in the market by Schall are said to be good. However, as no chloride of silver cell has yet given satisfaction, we prefer to reserve our opinion.

In addition to chemical batteries we have other means of producing electricity, such as the dynamo, which, for medical purposes, could be made to do anything, but its cost and other disadvantages put it beyond the reach of practitioners. Nevertheless, any electrician with the above given table could construct a dynamo suitable for our work, and, it might be added, that a dynamo turned out by one of the well-known makers of modern times would be by far the most convenient generator. There is one means, however, by which we can gain all the advantages of the dynamo, which costs less, and does away with the difficulties of primary batteries.

We have said that in the Leclanché cells the fall of the current is rapid when in use. This is mainly due to what is termed polarization. By this we mean the opposing E.M.F. set up by the disengaged bubbles of hydrogen on the carbon plate due to splitting up of the water into its constituent gases by the passage of a current. Now what constitutes the great trouble in primary batteries is really the basis of polarization batteries, otherwise called accumulators or secondary cells. Grove, in 1860, showed that a voltmeter in which water is decomposed between platinum electrodes could be made to yield a polarization current in a reverse direction to that in which the current flowed from the electrolyte.

A little later Kirchoff, in 1862, improved upon Grove's idea by substituting lead for platinum, and this invention was brought prominently to notice about the year 1870. Ever since that time improvements have been going on, and now the company manufacturing secondary cells (for they are all manufactured by the same company in England, the Electro-Power Storage Company) can give us a reliable and neat storage cell for almost any work required. The great advantages are compactness, non-fuming, exceedingly high E.M.F., non-polarization, great capacity, and no plates nor cells to clean, and no local action. Lastly, with them we can predict before beginning an operation the amount of current at our disposal. At first the specific gravity is about 1300 Twaddle, and it falls to 1145. By taking its specific gravity at any time, we know exactly what current remains in a cell. The disadvantages of this cell are that it has to be re-charged from the dynamo, and its cost.

The last generator to which we will refer is that recommended by Dr. Ogston, of Aberdeen. This generator has not come into general use, and experienced electricians are not very hopeful of it. Hammond and Noe have worked in this department, and something may yet come of it. Edison, too, has been working in this direction, although on different principles. The machine on which he has been engaged is termed the pyro-magnetic dynamo.

To sum up our views on this question, we would say that to those fortunately placed in the position of having electric wires passing their door nothing can be better than to have their supply direct from the main. Failing this it might be said that for throat work in the stimulation of nerve or muscle, or in electrolysis, a good Leclanché or Daniel battery of about 40-50 cells, or it may now be a smaller number of chloride of silver cells, should be chosen. For the cautery or lighting, or both, a suitable form of the accumulator should be used by those who can

have them re-charged at a dynamo, and failing this a well-constructed bichromate of potash battery is the next best.

Before passing to the consideration of the accessories required in medicine it is hardly necessary to refer to the distinction which is always drawn between the negative and positive poles. Chemically and physiologically, the two poles differ in their action. The whole formula of the electrical stimulation of normal muscle depends upon the action which the latter shows to the negative or the positive pole. When muscles or nerves are tested they either show the ordinary normal polar formula, or if they be diseased they depart somewhat from it, showing quantitative irregularity, *i.e.*, excess or deficiency in amplitude. Again, they may show qualitative abnormalities, such as in the order of appearance, the relative amplitude, response, mode of reaction or alternation in the relation between Kathode or Anode. By combination of these the ordinary reaction of degeneration is got. But it is quite unnecessary here to enter into the electro-physiology of the subject, because, after all, the normal reactions and departures therefrom are the same in the throat as in other parts of the body.

One more form of electric apparatus remains to be referred to—that is the so-called interrupted or Faradic current. This is best known to us in the form of the small Spammer battery, or in the more elaborate form of a large coil, such as that made by Du Bois-Raymond. In this form of electricity the ordinary current is interrupted and alternately reversed, and by the rapid series of shocks transmitted at the make and break of the current the motor nerve or muscle can be strongly stimulated. Elaborate arrangements have recently been made giving a current in one direction only, but, from a practical point of view, we are unaware of any great advantage to be derived from the same. A good deal of mystery surrounds this instrument because the current which is induced in the secondary coil can be given to the patient, or the interrupted current from the primary coil can be administered. The latter is stronger than the former and will certainly cause some of the muscles to react when the weaker current will not. As a rule, we use the secondary current, say, in cases of hysterical aphonia, and only resort to the primary when the secondary is too weak. In throat affections, at least, we know of no other rule to guide us in choosing one current in preference to another. As yet no easy method of measuring the interrupted current has been devised, but Schall promises to do this in a convenient form. At present most operators have to content themselves with testing the strength of the current on their own muscles, or some less sensitive part of the patient than the throat, say the neck.

A word or two about accessories. In every case one ought to be able to measure the current; hence a good galvanometer is necessary, so that we may register exactly what current the patient is getting. Secondly, the cells should be connected with a good collector, so that we can increase or decrease the number of elements in the circuit, and so regulate the strength of the current at will. Thirdly, all terminals should be large and kept scrupulously clean, and it is well to have some means

of reversing the current so that the negative pole may become the positive, and *vice versa*, at a moment's notice. All wires to and from the battery should be insulated, and of sufficient diameter to carry the current employed without heating. It is necessary to have some means of throwing in resistance when using the cautery; hence a rheostat is advisable, that we may keep our platinum point at a constant heat for a given period. If the cautery handle, or any part of the apparatus except the piece of platinum, becomes heated, it should be rejected. We have known as much as one-sixth of the current lost in a cautery handle, owing to the conductors through it being insufficient to carry the current.

ELECTRIC LIGHTING OF THE CAVITIES OF THE THROAT AND NOSE.

When the incandescent lamp was first produced it was thought it might prove useful in the illumination of these cavities. In the "Glasgow Medical Journal" for January, 1885, an article appeared by the writer of this paper, giving a number of drawings of an electric laryngoscope and rhinoscope, which had been shown at the Glasgow Medico-Chirurgical Society in November, 1884, and shortly afterwards Dr. Felix Semon brought out an electric laryngoscope on the same principles. While a number of these have been used, it cannot be said that the instrument has proved as popular as was anticipated, possibly on account of the obstruction caused by the small lamp placed in front of the mirror, and it may also be because the lamps are not perfectly made and soon burn down. Be the cause what it may, as a general rule we find either the gas or lime-light made use of in the consulting rooms of specialists in this country. There can be no doubt, however, that the electric laryngoscope has its advantages, and as the instrument improves it may become more popular; as yet, however, it shows no tendency to displace the ordinary laryngeal apparatus. It is different with the large incandescent lamps which some London specialists now employ, because with them a sufficiently good light can be got to take the place of the ordinary Argand burner. Attempts have recently been made on the Continent to illuminate the larynx from without, by sending a strong electric light through the tissues of the neck. Voltolini described a method of trans-illumination of the larynx in this way, and hoped by this method that we might be able to bring sub-glottic structures into view which are out of range of the ordinary laryngoscopic mirror, and that it would permit of the differentiation of lesions of the vocal bands and other structures by the variation and amount of translucency then exhibited. Freudenthal, Heryng, and Gottstein have been working in this direction, and more may yet be heard of the subject. The currents required for any of these methods of illumination can easily be got by combination of the Electro-Power Storage Company's accumulators. All that is required is a note of the number of volts and ampères required for the illumination of the particular lamp, be it great or small, and secondary cells can easily be made to do the work. For small lamps about five volts and one to two ampères suffice.

THE GALVANO-CAUTERY.

In referring to the use of the galvano-cautery in diseases of the upper respiratory passages, it may be advisable to speak in the first place of the construction of the apparatus now at our disposal. In his work on "Growths in the Larynx," published in 1871, Sir Morell Mackenzie gives an accurate description of the instrument as in use at that date. He says, "In addition to the inconvenience it causes to the patient, the galvanic cautery gives a great deal of trouble to the practitioner. As the wires have to be carefully isolated, the electrode is of course rather bulky, and the necessarily unwieldy covered wires, which are attached to the handle of the electrode, prevent the operator using the instrument with that delicate precision which is essential in all manipulations in the larynx. When to this is added the employment of strong acids, and a special electric apparatus which requires some experience in its use, and the presence of an assistant at each operation, it will be seen that the employment of the electric cautery introduces a number of complications and difficulties in the way of the operator. Further, as an instantaneous white heat ought to be produced, the wire at the extremity of the instrument must be exceedingly fine, and it is therefore constantly destroyed by combustion. Hence it happens that the instrument is continually in the hands of the instrument maker."

Now there can be no doubt that to-day a perfectly reliable instrument can be had with the aid of the dynamo, or secondary battery, and with a rheostat to govern the current, and the exercise of ordinary care, all the difficulties and disadvantages above mentioned may be said to have disappeared. When our experiments were first made, the currents actually employed in the galvano-cautery were not known, but it may be here said that after careful measurement it was found that at least twenty ampères of current should be at our disposal, and never less than ten. The voltage is comparatively small, five volts at the most being all that is required. Looking back upon the history of the galvano-cautery, and the splendid work which has been done by many in the improvement of the apparatus now at our disposal, it is impossible to avoid noticing that here and there symptoms of reaction are evident. For example, many surgeons refuse to put the heated wire within the laryngeal cavity, and others, who at one time thought the best treatment for the removal of nasal polypi was by the galvanic loop, now content themselves with the cold snare, and afterwards touch the part from which the tumour sprang with the cautery point. Even in the treatment of granular pharyngitis, Dr. Smyly of Dublin prefers the instrument devised by him for the cutting out of the granules, and in larger operations, such as the removal of the tongue, many surgeons who have paid considerable attention to this subject are by no means enthusiastic, and this in spite of the perfection to which the apparatus has now been brought. Wisely used, there can be no doubt that the galvano-cautery is a most useful, permanent, and—with the use of cocaine—practical form of caustic. In destroying hypertrophied tissue, and in arresting hæmorrhage, there can be no doubt about its value. We have frequently snared the tongue from side to side without seeing blood

Nevertheless, we confess to a feeling of satisfaction that this tendency to the less frequent use of the galvano-cautery is being expressed, because it is not at all impossible that it has been too extensively employed by some. The apparatus for its application need not be complicated nor expensive. A simple key which the operator can press with the foot is all that is necessary to make and break the current, and a piece of vulcanite, with two wires thick enough to carry twenty amperes of current passing through it, is all that is really required in the construction of a handle. Into the ends of the conductor, holes can be drilled for the reception of the various points at present in use. A rheostat should never be omitted in working the instrument, so that the exact heat required may be maintained during the application.

APPLICATION OF ELECTRICITY IN TUMOURS OF THE THROAT AND NOSE.

Some surgeons have tried electricity in the recurrent form of tumours, with what success we are not prepared to say. Theoretically it is difficult to say what could be obtained by so doing. The size of the electrodes, the pole to be applied to the tumour itself, and the current to be employed, are but a few questions which would naturally suggest themselves, and they are difficult to answer. Further experiments and light are required in this department. In other tumours of the neck, say goitre, something more can be said for the use of electricity. In a number of cases we have been successful enough in treating these swellings, but it must be confessed that in a number of other cases the treatment was quite unsuccessful, or at least a comparatively small reduction only was got. In two cases of cystic goitre the result in the fluid portion of the tumour was most successful. A platinum needle was introduced into the sac attached to the negative pole of a battery. A number four Erbs standard electrode was placed in the back of the neck attached to the positive pole. Currents from three milliamperes, and increasing to eight and ten milliamperes, were passed between these two points. In one case, as many as six sittings were required, and the cystic portion of the tumour certainly disappeared. Experiments, however, in these cases are still wanting. Aneurismal varix, which sometimes occurs in the upper respiratory tract, can be successfully treated by electricity in the same way as nævi in other parts of the body. In one well-marked case, where the tumour was about the size of a sixpence, situated on the posterior wall of the pharynx, about the level of the uvula, two long platinum needles were introduced, lying parallel with each other, and about a quarter of an inch apart, one attached to the negative, and the other to the positive pole of the battery. A gradually increasing current of from one to ten milliamperes was passed through the tumour; consolidation of the contents soon took place, and in four sittings of about four minutes' duration each the tumour was reduced to a mere hardened nodule on the posterior wall of the pharynx. Great care has to be exercised in the manipulation, because over-stimulation of the part might induce death of the tissues with consequent hæmorrhage. This I have seen occur in a case of nævus, situated on the side of the face and nose, and, although

the tumour was cured, the remaining scar was very bad. In another case of this aneurismal condition occurring in the palate, a quite successful result was obtained by repeatedly introducing a cautery point at a dull red heat into the substance of the tumour; the punctures were first made at the periphery, and then in the centre. No hæmorrhage took place during the operation, which was finished at one sitting, and was performed without pain after brushing the parts with cocaine.

TREATMENT OF NERVOUS AND MUSCULAR LESIONS OF THE LARYNX AND PHARYNX.

It is impossible to lay down definite rules which will include the treatment of all nervous and muscular lesions occurring in the upper part of the respiratory tract, but in the first place we would say regarding applications of electricity, that it becomes the duty of the surgeon to mention the size and exact sight of the electrodes—that is to say, the plates, sponges, or other apparatus which come in contact with the body. Erb has done a good deal for medicine in placing a number of standard electrodes at our disposal. Secondly, it is very desirable that the exact current used should be registered, and for this purpose, Hirschmann, Edelman and others have proved that sufficiently reliable instruments for medical purposes can be made, and hence the use of the galvanometer as part of the accessories which are recommended in a former part of this paper. Doubtless these instruments are not perfect, and currents do not act the same way on different patients, but in using such an instrument we have at least the satisfaction of knowing that from day to day, as we administer a current, we have reduced our errors to a minimum, and established a method of comparison by means of which the case can be judged in its progress.

In seeking to frame a few rules it will be found that the difficulties are at least four in number. Firstly, whether we should use the negative or positive pole; secondly, what dose should be given? thirdly, what should be the duration of the sitting? fourthly, whether we should use a constant or an interrupted current.

With regard to the pole to be used, it may be said that the older ideas of ascending and descending currents are not now considered of such importance, and, indeed, the more we get to know of the action of the two poles, the less we are able to define their action. For medical purposes the practical issue seems to be that we are to be guided by what we know to occur when the current is applied in health. We know from this that the negative pole is more irritable than the positive, and the formula for the stimulation of normal muscle shows that muscular contraction takes place on closing with a weaker current if the negative electrode be applied to the muscle and the positive placed at a distance.

But after all it is a matter of degree, because if contraction of the muscle be the object in view the positive pole would do the same work with an increase of current. Secondly, with regard to the dose; this can only be tested by experience in a given case, but for the guidance of those using the above instruments we would say that mild currents are best—we seldom require more than ten milliamperes. Thirdly, the

duration of the application must also be a matter of trial with the individual patient, but, as a general rule, we prefer to give mild doses with longer applications rather than strong currents of short duration. Fourthly, the difficulty in choosing between the interrupted and constant current is not so difficult as it at first appears. Examination of the physical results of the poles shows that many facts are common to both currents, and this is, as might be expected, because after all they are the same agent under different conditions. Nevertheless, in pathological conditions we know that the currents react unequally. Take, for example, the condition known as the reaction of degeneration. In treating such cases we simply use that current to which the muscles will respond, then the other is used until the muscles regain their normal electrical reaction. To apply the above rules, let us grant that the current is capable of influencing nutrition, can produce a sedative or stimulating effect, and that it will cause muscular contraction. In a case of anæsthesia, when we wish to restore the function, a number three or four electrode should be bent so as to fit the neck and attached to the positive pole of the battery. The negative pole is to be attached to a small brush or sponge, and by this means the part affected can be stimulated with a mild current, say something between one and ten milliampères as the patient can stand it. If, on the other hand, in a nervous affection, a sedative action be required, the reverse of this polar arrangement would be tried with the same apparatus.

Again, we know that the conductivity of a nerve may be increased by the passage of a current through it. For example, in some cases a muscle will not respond at all, or will possibly only respond after the nerve has been subjected to a current of electricity for some time, and so we find in deficiency of nervous stimulus the mere passage of a mild current in any direction does good. Take, on the other hand, the case of a muscle which has lost its power of contraction, as in any case of motor paralysis; then the positive electrode should be applied towards the central end of the nerve as described above, and the negative applied to the muscle or group of muscles affected. By gradually increasing the current we can easily find what is necessary to cause the muscles to respond as we close the circuits.

In carrying out the above treatment we have found the well-known single electrode of Sir Morell Mackenzie of the greatest advantage, although we are not in the habit of using his double electrode.

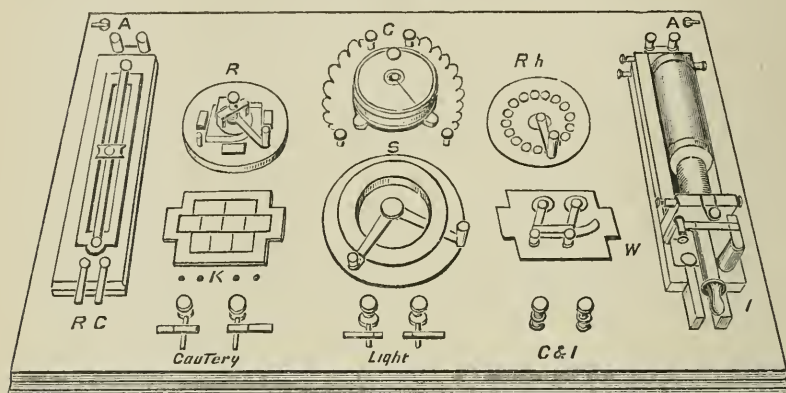
There is one affection about which we have not said much, because the application of electricity in it is so well known and so very successful, viz., in hysterical aphonia where the use of the interrupted current is of undoubted benefit. We may make one remark to the effect that we do not always consider it necessary to put the electrode inside the throat, as the same effect can often be got by passing the current through the skin.

We think it right to bring this matter of electrical stimulation of nerves and muscles before those specially engaged in throat work, because we are convinced that the currents employed, particularly the interrupted form, are often too strong, and indeed, on making inquiry, one is sometimes at a loss to understand why electricity has been employed at all. There can

be no doubt that in medicine and surgery electricity has been blindly made use of to a much larger extent than it ought. Disappointment naturally has been the result, and not a little discredit has often been thrown upon the operator as well as the agent. It becomes us, therefore, to be able to give some reason why we apply the current in a particular case, and if an accurate record of the exact currents employed were furnished by each operator, a correct knowledge of the true value of electricity in these affections would soon be acquired.

In conclusion, we give a drawing of an electrical switch table designed by the writer, and made for him by Schall in London. It is intended to combine everything which is necessary for the application of electricity in diseases of the throat.

ELECTRICAL TABLE FOR CURRENTS EMPLOYED IN DISEASES
OF THE THROAT.



A A, Terminals in connection with forty large Leclanché cells (these may be situated anywhere, and are best out of the consulting room); S, Schall's double selector, by means of which any one or any number of cells can be put into the circuit; Rh, Rheostat with 5000 ohms to regulate the strength of the current, and to measure resistance; G, Edelmann's galvanometer, measuring from 1 to 250 milliampères; I, Large coil for the interrupted current, with scale for approximate measurements of the currents employed; W, De Watteville's key, by means of which the constant or interrupted current can be given, or both at the same time; R, Rheostat for the cautery, which is worked by secondary cells, giving six volts and twenty ampères; K, Keys, by which any part of the apparatus can be put in action. In front are three sets of terminals for attaching wires for lighting, cautery, or the constant and interrupted currents.

CLINICAL NOTES.

CASE OF MALIGNANT DISEASE OF THE ŒSOPHAGUS,
WITH PERFORATIONS OF THE TRACHEA AND
BRONCHUS.—DEATH.

By G. HUNTER MACKENZIE, M.D., Edinburgh.

M. C., male, aged forty-four years, commercial traveller, applied at the Eye, Ear, and Throat Infirmary on April 1, 1890. He complained of a difficulty in swallowing, at first slight and intermittent in character, but a few days previously this had suddenly become more intense and persistent. Patient was of alcoholic habits. He had had no previous important illness.

His present complaint dated from Christmas, 1889, when slight difficulty in breathing and swallowing was present. This occasionally passed off, and he could then breathe and swallow without difficulty, until a few days before application at the infirmary, when, as already stated, the difficulty became more persistent, especially on deglutition. On March 17 he had a severe attack of hæmorrhage, which was controlled by the use of the tannic and gallic acid mixture, T. H. P. (It is of interest to note here that the hæmorrhage never recurred).

On admission he was somewhat emaciated. The percussion note seemed slightly impaired at the right pulmonary apex, and the breath-sounds seemed hardly so clear as over the left. Some hard masses were felt, deeply situated along the right side of the trachea, and the right lobe of the thyroid was enlarged. The *vox anserina* was present. On laryngoscopic examination the right vocal cord was found completely paralyzed in the cadaveric position. Fluids required from ten to twelve seconds to enter the stomach from the time of swallowing, and auscultation of the gullet gave distinct indications of some obstruction in its upper third. As passage of a bougie caused considerable irritation, the patient was put under chloroform, when it was found that the instrument was arrested about six and a half inches from the front incisor teeth. Aneurismal signs were absent.

The patient lingered on until May 9, when he died. During this period the principal clinical points were, increasing difficulty in swallowing, impossibility of passing stomach tube on account of the violent irritation and retching thereby induced, and the feeding of the patient *per rectum*.

An inspection of the gullet and windpipe was made on May 10. Along the left side of the trachea, from the inferior border of lobe of thyroid, was a chain of hard masses, each being rather larger than a bean, with several smaller masses interspersed. These extended beyond the bifurcation, but did not apparently press on the trachea or bronchus. On the right side there were similar masses, but twice as large, extending

downwards in a similar way, and pressing slightly upon the right bronchus. The thyroid lobes were enlarged, but not diseased.

On laying open the gullet there was found on the posterior wall, corresponding to the lower third of the trachea, an ulcer, about two and a quarter inches long, with several honeycomb openings, the largest of which might be covered by a threepenny coin, leading into the deeper peri-œsophageal tissues. On the anterior wall was a corresponding ulcer, leading by a conical opening into a pit, at the bottom of which was an opening into the left bronchus, large enough to admit a grain of rice. For an inch and a half upward the gullet was thoroughly healthy, then another ulceration was reached, extending upwards for about four inches, with a breadth of about three-quarters of an inch. The tracheal cartilages were there entirely eroded, and free communication existed between the food and air passages.

The recurrent laryngeal nerves were pressed upon by the above described masses. This pressure was most marked on the right side. Microscopical examination indicated carcinoma.

Remarks.—The course of this case was unusually rapid, the patient dying in about four and a half months from the onset of symptoms. The signs on gastric auscultation, and on passage of the œsophageal tube, may be briefly commented on.

Regarding the former, attention may be directed to some valuable observations on the subject by Professor Ogston, Aberdeen (*On the Diagnosis of Stricture of the Œsophagus*, "Manchester Med. Chronicle," Jan., 1887). He regarded the degree of rapidity of the passage of the food along the gullet as being a very valuable sign of stricture of that tube. A healthy person requires four seconds for passage of food from the mouth to the stomach. The rising of the *pomum Adami* tells that it has passed the pharynx into the œsophagus, and placing the ear three inches below the angle of the left scapula, a distinct amphoric or gurgling sound tells that food has entered the stomach. With watch in one hand, finger on the *pomum Adami*, and directing the patient to hold fluid in the mouth till told to swallow, the time of entrance into the stomach can easily be calculated. In case of stricture, the food takes fourteen or sixteen seconds instead of four to traverse the œsophagus. Ogston believes this to be very useful and reliable in most cases.

In the case now reported, the interval of ten seconds occupied by the food to pass into the stomach indicated that some degree of constriction existed, though not to the extent sometimes met with in malignant disease.

In regard to the passage of œsophageal bougies and tubes, which, to admit of correct conclusions being arrived at, ought always to be done under an anæsthetic, the experiment of Maurice Richardson (*The Possibility of Operations on the Œsophagus through the Stomach as shown by Dissections*—Transactions of the Ninth International Medical Congress, 1887) are very *à propos*. This observer found that there is no constant ratio between the height of the individual and the œsophageal measurements. When the head is thrown back in the position for passing

the probang, he found that the average distances from the front incisor teeth were, to the opening in the diaphragm, fourteen and a half inches, and to the cricoid cartilage seven inches. Here, the arrestment of the tube about six and a half inches from the front incisor teeth gave a correct clue to the locality of the disease.

It may be incidentally remarked that while Richardson's experiments gave fourteen and a half inches as the average, ten and a half inches as the minimum, and seventeen inches as the maximum distance from the front incisor teeth to the opening in the diaphragm, a case of cancer of the œsophagus was recently brought before the Pathological Society of London ("British Medical Journal," April 5, 1890), in which it was stated that "rubber quarter-inch tubing, to the length of twenty-two and a half inches, was passed down the œsophagus, and left in until next day, when "it was removed, as it became blocked." On another occasion, a catheter was passed twenty inches from the teeth. It is curious to note that no comment was made upon this filling of the stomach with rubber tubing and curled catheter, unnecessary proceedings under any circumstances, but more especially so with the disease located, as was the case, opposite the cricoid cartilage.

The treatment in the present case calls for little comment. The patient declined surgical interference, and during the last week or two of his life was mainly dependent upon rectal feeding. There was no indication during life of the trachea or bronchus having been eroded, and consequently these conditions were not diagnosed.

ANNOTATIONS.

A VERY interesting subject was chosen for the Morrison Lectures of 1890 by Dr. Clouston. These are now appearing in the "Edinburgh Medical Journal," the January, 1891, number of which contains the first instalment. The life history of man includes not only the two periods of growth and development, but the two physiological periods of absolutely non-reproductive and gradually developing reproductive capacity, the period before puberty, and that from puberty during adolescence up to maturity. "The periods of brain growth, and that of non-reproduction, do not absolutely correspond, but it may be held as a great law that when "active cell growth ceases in the cortex, then only does reproductive "function begin." . . . "Certain mental disturbances in the functions of "the brain are intimately associated, hereditarily and functionally, with "certain motor, sensory and trophic neurosis, incidental to the period of "development." Dr. Clouston believes that if our knowledge of heredity and physiology were sufficiently advanced, we should be able to fit into a comprehensive scheme and show the true relationship "of the "acephalous fœtus, the hare-lipped, the cleft-palated, and the open-spined "child, the congenital imbecile, the deaf and dumb, the cases of infantile

"delirium and *pavor nocturnus*, the convulsions of teething, those of "chorea and epilepsy occurring before twenty-five, the speech defect of "stammering," etc. The maturing of portions of the body tissues is quite a different thing from the full maturity of development of the whole organism, and a defective maturation of any organ or tissue, or its temporary or permanent retrogression, make it abnormally non-resistive to disease. Granted the truth of this law, we have advanced an important step along the way to explain what we mean by that vague and often loosely-used expression, "diminution or want of resistance."

To the author there seems to be "an important unwritten physiological "chapter on the exact order of development and coming to perfection of "the various tissues and organs of the body." The higher nervous tissues attain this perfection last, and the full growth of the development of "function" of the brain is a slow process, taking place long after the attainment of complete bulk of the organ. The trophic and organic functions of the brain are evolved first, and soonest reach perfection, even before birth; sensation, common and special, comes next, soon after birth; the motor processes perfect more gradually, and not until adolescence is nearly completed. The full development of motor co-ordinations is not complete until much later. It is not merely the onset of puberty which influences these stages of development, but the fact, too little regarded, that the perfection of the reproductive capacity necessitates a considerable number of years—Matthew Duncan put it at twelve at least in the female—for its attainment.

We are as yet profoundly ignorant of the real causes which determine intra-uterine embryonic defects. Not all arise out of heredity—for instance, the atrophic intra-uterine defects, *e.g.*, acephaly, hare-lip, cleft palate, deformed palate, malformations of limbs and organs, and genetous idiocy. Birth is another great crisis, and the period of rapid development of the brain up to seven or eight years of age brings out the defects of a bad heredity, such as convulsions, squint, stammering, backwardness of speech, night terrors, deaf dumbness, infantile paralyses, hydrocephalus, rickets, night delirium, etc., etc. The period of co-ordination of motion and emotion (from seven to thirteen) is answerable for chorea, epilepsy, asthma, megrim, etc., and the period of puberty and adolescence (from thirteen to twenty-five) to epilepsy, chlorosis, hysteria, and various perversions of the moral sense and insanity, etc., etc., in the list of which Dr. Clouston includes naso-pharyngeal polypi.

The lectures, though mainly psychological, are worthy the attentive perusal of every intelligent practitioner. They open up new lines of thought and most interesting problems.

We have always maintained that an intelligent study of the etiology of disease must include or be founded upon rational developmental principles. Psychological studies such as these are the fitting corollary to the developmental studies of the comparative anatomist and physiologist, and there are many dark places in the etiology of disorders of the throat and nose upon which some light may be shed by the help of psychological and physiological studies like these of Dr. Clouston,

WITH "Kochism" raging everywhere, it was to be feared that caution, like physis, was too much in danger of being "thrown to the dogs." A hasty spell of excessive enthusiasm is suffering the inevitable reaction, and already warning voices are raised in many quarters, and demanding the attention they would not have received a few weeks ago. Those who wisely stood on one side, deciding to watch the logic of events, have reason to congratulate themselves upon having escaped being drawn into the vortex of excited enthusiasm. It is more than probable that if some of the laudations first uttered had to be spoken and printed to-day the evidence of the judicial pruning-knife would be visible. It is far from our intention to put forward any adverse criticism of the method as originally propounded by its inventor—indeed, it is scientifically correct in theory without a doubt—but it is against the indiscriminate advocacy of the treatment to too credulous patients that we raise objections, several instances of which have come under our immediate notice; also we would point out that the resources of science in the fight against tuberculosis are not exhausted by the rise or fall of "Kochism," and it is well to remember that, in laryngology at least, there are well-tried intra-laryngeal methods of treating the local disorder which have been followed by as successful results as the now fashionable craze.

IF report speaks truly, it would seem that the Royal Colleges of Physicians and Surgeons are bent on a raid upon the specialties of Laryngology and Rhinology. We hear rumours of one well-known Fellow of the former having been haled before the justice seat in Pall Mall. The matter which called for censure is said to have been one of "fees."

It is a singular thing that there does not seem to be any generally accepted standard of fees in the specialty!

The names of some well-known rhinologists are mentioned as likely to be "called to order" by the body in Lincoln's Inn. What the precise manner of their sinning, except for the practice of a specialty, may be, we do not know. In this country the specialties have always met with determined antagonism from a few mediævally constituted minds. It is too late for the Royal Colleges to seek to hamper the specialties of Laryngology and Rhinology. They must be accorded as much latitude as the practice of Gynæcology or Ophthalmology, and it is to be hoped that the action of the Colleges is not to be interpreted as a move in the direction of further antagonism to the specialties. If so, it will certainly be met with opposition both in the profession and out of it.

AN important announcement appears in the "Medical News" of January 3. It is a preliminary note from Drs. Schweinitz and W. M. Gray, to the effect that by cultivations of Klein's diphtheria bacillus (probably identical with the Klebs-Loeffler bacillus) they have succeeded in obtaining a chemical substance which renders guinea-pigs insusceptible to diphtheria when the strong virus is introduced into the system. Control guinea-pigs died in from twenty-four to forty-eight hours. They firmly believe that

the experiments being made will demonstrate that they have obtained a substance which will control or prevent diphtheria in man. We shall look anxiously for the publication of confirmatory proof of this statement, the interest and importance of which would not be less than that attaching to inoculations against tuberculosis.

NEW INSTRUMENTS.—DIPHTHERIA, &c.

Hartmann (Münster).—*New Laryngoscope*. "Deutsche Med. Woch.," 1890, No. 46.

THE mirror can be removed from the metal parts, so that both can be easily disinfected. *Michael.*

Wagener (Halle-a-S.).—*A Laryngeal Micrometer*. "Berliner Woch.," Nov. 5, 1890.

ON the reflector is fixed a second mirror, and a little apparatus on which is a measuring scale. The image of the larynx in the second mirror is seen with the scale superposed, and thus the different parts of the larynx can be measured. *Michael.*

Blenkarne, W. L'H. (Leicester).—*An Improved Insufflator with Adjustable Tongue Depressor*. "Lancet," Jan. 10, 1891.

ANOTHER modification of Dr. Osborne's. Osborne combined the insufflator and tongue depressor. Blenkarne separates them again. He, however, has ingeniously adapted to the upper surface of the tip of an ordinary tongue depressor a ring, through which, with room for play, the point of an air-ball insufflator can be passed, and satisfactorily steadied. (A very practical addition—Reporter.) *Dundas Grant.*

Bronner, Adolf (Bradford).—*Cotton-wool Holder for the Application of Lactic Acid to the Larynx*. "Lancet," Jan. 10, 1891.

APPARENTLY identical with Smyly's cotton-wool holder so long and generally used, but with the stem separable from the handle for purposes of disinfection. An improvement—slight. *Dundas Grant.*

Thost.—*A Tracheal Dilator*. Meeting of the Aerztl. Verein, Hamburg, July 1, 1890.

THOST showed a dilator for the trachea, which could be introduced through the tracheotomy opening in children. He was in expectation of curing a case in which a canula had been retained. *Michael.*

Schwendt (Bâle).—*New Instruments*. "Monats. für Aerztl. Poly.," 1890, No. 11.

(1) *Laryngeal Powder Insufflator*. The principle of Rabierski's insufflator applied to the larynx.

(2) *Tampon Holder of Hard Rubber* to fix tampons introduced into the nose by means of Bellocq's tube, *Michael,*

Hewitt, Frederic (London).—*Remarks on the Administration of Anæsthetics in Oral and Nasal Surgery.* "Lancet," Jan. 10, 1891.

FOR operations requiring longer anæsthesia than nitrous oxide affords, the writer recommends placing the patient well under ether (preluded, if preferred, by nitrous oxide or A. C. E. mixture), and keeping up the anæsthesia, if necessary, with chloroform, taking great care not to substitute the chloroform for the ether till the patient commences to show signs of emerging from the ether narcosis. Regarding the position of the patient, when considerable hæmorrhage is expected, one of two positions should be chosen if circumstances permit: 1. The etherised patient may be slowly raised into the sitting posture, and his head and shoulders thrown well forwards (good for removal of post-nasal adenoids under ether—not chloroform). 2. He may lie upon his side with one arm under him, and, his head being near the edge of the table, with his face directed downwards (for removal of nasal or naso-pharyngeal polypi, etc.). In cases of complete or nearly complete nasal obstruction, a small mouth gag [more euphemistically "prop"—Reporter] should be introduced before commencing the administration. Extra caution is required if the nature of the affection is one which embarrasses respiration. An illustration is given of an ingenious addition to the ordinary Mason's or Ferguson's gag, namely, tubes running along the blades, through which chloroform vapour may be made to pass by means of a Junker's apparatus. In cases in which there is very severe hæmorrhage, it is best not to maintain very deep narcosis, the abolition of the corneal reflex not being necessary as a rule.

Dundas Grant.

Pugin, Thornton.—*Anæsthetics in Tracheotomy.* "Lancet," Jan. 24, 1891.

DEPRECATION of anæsthesia for tracheotomy as "nothing less than sinful." Recommendation of freezing of the skin as sufficient. The two dangers pointed out are the possibility of the patient suffocating while it is being given, and the inability of the unconscious patient to cough up the blood which is blocking up the air-tubes. (These objections do not apply to the subcutaneous injection of cocaine at the seat of the skin incision, and which the Reporter has frequently found amply sufficient.)

Dundas Grant.

Herzfeld (Berlin).—*Massage in Diseases of the Throat and Nose.* "Deutsche Med. Zeit.," 1890, No. 39.

THE instrument employed consisted of a rubber cushion, set in rapid movement by means of a dentist's engine. In nervous affections he got good results, but in cases of rhinitis and pharyngitis sicca he failed to get the effects reported by Braun of Trieste.

Michael.

Gooch, James W. (Eton).—*Report on an Outbreak of Diphtheritic Tonsillitis at Eton College in September, 1889.* "Brit. Med. Journ.," March 1, 1890.

THE author has arrived at the following conclusions:—

1. That infected milk was the cause of the disease.
2. That the water in which pails, etc., were washed were not in fault, as it continued to be used after the cessation of the outbreak.

3. That disease germs can pass through the system of a cow, and be excreted in the milk in an active condition.

4. That boiling the milk destroyed the vitality of the germs.

5. That the disease was perfectly distinct from diphtheria, scarlatina, or follicular tonsillitis.

6. That the disease was non-infectious from the fact that no person took it who had not drunk the milk, although in close communication in school, etc., before isolation.

The cows had access to a ditch polluted with sewage from a town in which scarlet fever had been prevalent. *Hunter Mackenzie.*

Editor of "British Medical Journal" (London).—*Diphtheria in Tredegar.*

"Brit. Med. Journ.," March 29, 1890.

AN annotation dealing with this subject. The Local Government Board inspector reported the three chief requirements of the place to be a proper system of sewerage and drainage, general improvement of the dwelling accommodation, and the provision of means of dealing with infectious and spreading disease. *Hunter Mackenzie.*

Seibert, A.—*A Sub-Membranous Local Treatment of Pharyngeal Diphtheria.*

"New York Med. Journ.," Dec. 6, 1890.

THIS is founded on the principles that (1) the pseudo-membrane is an exudate coagulated in the epithelium coming from the deeper layer of the mucous membrane, and therefore not the disease, but the result of it. (2) All treatment attempting to dissolve or forcibly take away this pseudo-membrane *is to no purpose*, as it does not in the least affect the diphtheritically inflamed parts. (3) All medicines given by the mouth for the purpose of entering the invaded region of the mucosa are of no use whatever in this direction, as they cannot possibly penetrate the coagulated fibrin and swollen epithelium to reach the bacteria producing this affection. (4) All local applications of strong caustics—as the galvano-cautery, nitrate of silver, etc.—are of no avail, as the diphtheric germs are far beneath the reach of these agents. Seibert therefore employs a hypodermic syringe, having attached to it a tube long enough to reach the pharynx. To the end of this tube is screwed a small hollow plate, on one surface of which are five hollow needle points, each one-eighth of an inch in length. The tube may be straight or curved, and the plate attachable by its dorsum or its edge, so that almost any part of the pharynx may be reached. By means of this he injects two minims of chlorine water into and through the patches, and finds it a safe and efficient means of destroying the diphtheria germ. He found by experiment that it would penetrate coagulated blood-albumen, and that it acted upon epithelial cells and blood-corpuscles. From the results in several cases of diphtheria, he argued "that the chlorine water, thus brought in contact with the Loeffler bacilli and the inflamed parts, evidently tends to check their career in the mucous membrane and to shorten the disease."

Dundas Grant.

Neech, James T. (Tyldesley).—*Diphtheria and the Cow.* "Brit. Med. Journ.," March 8, 1890.

REFERRING to Mr. Gooch's paper (*vide supra*) the author observes that,

before he can accept the third conclusion, that "diseased (*sic*) germs "can pass through the system of a cow, and be excreted in the milk in "an active condition," he would like to know whether the cow's udders and teats were thoroughly cleansed each time before they were milked, otherwise the contaminated water would be splashed over them and so infect the milk.

Hunter Mackenzie.

Beck—*Etiology of Human Diphtheria*. "Zeitschrift für Hygiene," 1890.

IN thirty-two cases of diphtheria, the bacillus of Loeffler was found by means of bacteriological examination. In twenty-eight cases of "angina follicularis," and in seventeen cases of "angina catarrhalis," it was absent. "Reinculturen" of the bacillus could be made from which it was possible to inoculate animals with diphtheria, thus proving with certainty that this bacillus is specific to the disease.

Michael.

Jangl.—*The Bacillus of Loeffler in Diphtheria*. "Königliche Gesellschaft der Aerzte," Buda-Pesth, Oct. 18, 1890.

THE bacillus of Loeffler was found in eighteen cases of diphtheria. By inoculation of the cultures Jangl was able to produce in animals the symptoms of the disease. Paralysis of the glottis, pharynx, and soft palate were also produced. The microbe was found also in cases of pure croup.

Michael.

Brieger and C. Fraenkel.—*Researches on the Bacteric Poisons*. "Berliner Klin. Woch.," 1890, No. 49.

C. Fraenkel (Königsberg).—*Experiments on Immunity from Diphtheria*. *Ibid.* BOTH authors have found that the effect of the pathogenic bacteria is produced by the products of tissue-change. These products are called toxalbumins. They are different from the enzymes or ferments, these being effective in even the smallest doses, whereas the effect of the toxalbumins depends on the amount of the dose. To produce immunity Fraenkel tried toxalbumin which had been submitted to a drying process, but without effect. When he used the culture-fluid, filtered or heated to 55° C, he produced increased power of resistance to the action of virulent bacteria. Good results were obtained by the use of a culture-fluid heated to 60°-70° C, and three weeks old. By the use of this he was able to produce in guinea-pigs immunity against virulent inoculation. The poison produced by the diphtheria bacillus and the immunity-affording fluid are two different substances, both contained in the culture-fluid. The substance is incapable of producing therapeutic effects.

Michael.

Behring and Kitasato.—*On the Production of Immunity against Tetanus and Diphtheria in Animals*. (At the Hygienic Institute of Geheimrath Koch.) "Deutsche Med. Woch.," 1890, No. 49.

Behring.—*Researches on the Production of Immunity against Diphtheria in Animals*. (At the Hygienic Institute of Geheimrath Koch.) "Deutsche Med. Woch.," 1890, No. 50.

THE first paper proves that immunity can be produced in animals by

inoculating them with serum from animals in whom immunity has been already produced. Tetanus is specially dwelt on, the evidence being stronger than in the case of diphtheria.

In the second, the author describes the various methods by which he was able to produce immunity. They are as follows :—

1. The injection of sterilized cultures of diphtheria-bacillus.
2. Adding minimal proportions of iodine trichloride to the cultures.
3. Injection of the products of the diphtheria-bacillus in living animals as exudates and transudates not containing the bacillus.

4. Animals which are infected by the bacillus and afterwards treated by means of naphthylamin, chloride of gold and sodium, or especially trichloride of iodine, often remain healthy, while certain animals infected in the same manner speedily die. The author says expressly that these medicaments have up to the present no effect in human diphtheria, some experiments having given negative results.

5. Injection of hydrogen superoxide was found to produce immunity in guinea-pigs, rabbits not being able to support the action of the medicament. Animals first infected and then treated with the medicament were less sensitive to diphtheria than those not so treated. The acquired immunity can be lost by repeated injection of the virus. The blood of animals rendered insusceptible was used for making cultures of the diphtheria-bacillus, and was found to act no differently from other blood. The bacilli gave cultures of normal or increased virulence. *Michael.*

TUBERCULOSIS OF THE UPPER AIR-PASSAGES

TREATED BY KOCH'S METHOD.

Ebstein (Göttingen).—"Deutsche Med. Woch.," 1890, No. 51.

A PATIENT, fifteen years of age, with lupus of the face, had also destruction of the epiglottis by the same disease. The part was a deformed white cicatricial mass. After the injection it was covered with tuberculous ulceration. The author further mentions shortly two patients with tuberculosis of the lungs and larynx, and describes more in detail one in which there was no local reaction in the larynx, and no rise of temperature. It was a case of destruction of the right vocal cord with characteristic spots on the posterior wall. Some days after the injection the larynx had somewhat improved.

Lenhartz (Leipzig).—*Ibid.*

THIS writer observed in a patient forty-eight years of age, with great enlargement of the glands of the neck, œdema of the arytenoids and epiglottis, completely hiding the glottis. It was impossible to say whether it was tuberculosis or cancer. The effect of injection enabled

him to diagnose tubercle. He also observed marked local reaction in a case of lupus of the pharynx.

Michelson (Königsberg). "*Berliner Klin. Woch.*," 1890, No. 48.

TWO cases of lupus of the tongue are described. The first was a lady, forty-eight years of age, with cicatrices on the soft palate, flat ulceration covered with pus on the pars oralis pharyngis. The region of the lingual tonsil was covered with red granulations continuous with the epiglottis. The latter was so thickened as to conceal the entrance of the larynx. The larynx appeared to be for the most part normal. Under treatment by removal of the neoplasms and the application of caustics improvement took place. After injection of Koch's fluid there was a rise of temperature, and great swelling of the affected parts. The second case was one of lupus of the tongue lingual tonsil and larynx to be treated in the same way, the result to be reported later on.

B. Fraenkel.—"Deutsche Med. Woch.," 1890, No. 51.

THIS observer related his experience before the Berlin Medical Society. In all cases he found redness and swelling of the larynx, but never to such a degree as to give rise to any danger of suffocation, even in cases in which there was pre-existing stenosis. In the most favourable cases tuberculous swellings disappeared without loss of substance. In other cases injection treatment was followed by destruction of tissue and ulceration. In a third class of cases acute caseation took place. Destruction of tissue was frequently observed in cases which appeared to be previously healthy. Ulcerations which had been already present before the commencement of the treatment suppurated after it in the same manner as after surgical interference. Improvement was observed by the author in all his cases. He showed several patients. 1st. One formerly treated by curettement and pyoktanin. There had been ulcerations of the right arytenoid cartilage. At present the larynx was healthy, only cicatricial spots could be seen. The rhonchi disappeared from the lungs, and the bacilli from the sputum. 2nd. A case of lupus of the nose, cicatrizing. 3rd. A patient having before the treatment extensive ulceration of the vocal cords and the posterior wall; much improved. 4th. A lady with a form of tuberculosis similar to lupus, infiltration of the epiglottis and vocal cords, with laryngeal stenosis; much improved. 5th. A patient under the author's care some months before with ulceration of the posterior wall. Recently there was in the situation of the ulcer a tumour of the thickness of a finger. After several injections the tumour was seen to have decreased in size and to be covered with a membrane. 6th. A patient with extensive tuberculosis of the pharynx, degeneration of the epiglottis and tubercle of both lungs. After the injections the ulcers on the pharynx showed the so-called acute caseation, and the subjective symptoms became less severe, especially the difficulty in swallowing.

Prof. Krause.—"Deutsche Med. Zeit.," 1890, No. 102.

AT the meeting of the Deutsche Gesellschaft für öffentliche Gesundheitspflege, on December 8, 1890, Krause related his views on the

method (already communicated in the reporter's first account) and described more extensively some cases observed by him. The first of them—the young lady referred to whose history was given in the first report—was the subject of still further local improvement, but her general health was so bad that he did not expect to keep her alive. A second had hæmorrhage. There was infiltration of the posterior wall and both arytenoid cartilages. After the disappearance of the infiltration there remained a granulating wound surrounded by bleeding points. In another case the absorption of an infiltration of the posterior wall was clearly observed.

In a patient temporarily improved by curettement seven weeks before, and having at the date of commencing the injections extensive ulceration and infiltration of the posterior wall, the whole infiltration was in a short time absorbed, so that there was scarcely anything abnormal to be seen at the seat of the disease. Two other cases were already reported. In another case, the diagnostic effect of the lymph would be very interesting. A robust man had an isolated infiltration of the left vocal cord, which seemed so characteristic of carcinoma that it was proposed to operate, but the examination of an excised portion showed that it was tuberculous. The patient, whose lungs were healthy, showed no reaction.

The author concludes that even in progressive cases the treatment will have a curative or ameliorating effect.

Rosenfeld (Stuttgart).—"Deutsche Med. Woch.," 1890, No. 51.

HE narrates two cases. 1st. In a young lady having tubercle in the lungs and pain in the larynx, there appeared after the first injection a flat inter-arytenoid ulcer. 2nd. A young lady with tubercle of the lungs had hoarseness and swelling of both ventricular bands after the first injection.

Michael.

Williams, C. T. (London).—"Brit. Med. Journ.," Dec. 20, 1890.

DR. WILLIAMS, of the Brompton Consumption Hospital, thus sums up his observations of one hundred cases examined by him during a visit to the various hospitals in Berlin.

"The above eight cases" (described in the paper), "with a few in Professor Ewald's clinic, were all I could collect, though I doubt not there are many more, as examples of genuine improvement under the Koch treatment, and this out of about one hundred examined by me. The improvement, though striking, is not more than is met with in the wards of the Brompton and other consumption hospitals under the ordinary conditions of diet and treatment. They would not for an instant compare with the results obtained at the high altitude sanatoria, such as Davos, St. Moritz, or Colorado, where the restoration to health is often complete, and no physical signs or tubercle bacilli remain.

"My impression, however, is that the Koch treatment is worthy of a careful and prolonged trial in, when possible, as Professor Koch himself advises, proper sanatoria, with the addition of pure air, and good food, and careful nursing."

Skerritt and Baron (Bristol)—“*Bristol Med. Chir. Journ.*,” Dec., 1890—record their observations upon cases observed by them during a visit to Berlin. “The evidence at present at our disposal warrants the conclusion “that the beneficial effects of the remedy are undoubted in tuberculosis “of the skin, bones, joints, glands and throat. With regard to pulmonary “phthisis, whilst there is good reason to hope that in suitable cases a “most satisfactory result may be obtained from this treatment, sufficient “time has not as yet elapsed to allow of the formation of any accurate “estimate of its value.”

Broadbent (London) forwards to the “*Brit. Med. Journ.*” of Jan. 24, 1891, a letter from Dr. Lawrence, in which, after referring to Koch’s method, the latter relates two extraordinary cases which occurred in his experience of well-marked tuberculosis (with large vomicae and emaciation), both patients being in the last stage of phthisis. Both patients were attacked by very virulent small-pox, with very high temperatures. Both recovered from this disease, and at once the pulmonary symptoms disappeared, the patients put on flesh, and are now the living images of health! Dr. Lawrence formulates the theory that the high temperature may have destroyed the bacilli.

Virchow’s lecture at Berlin (Jan. 7, 1891), published in the “*Brit. Med. Journ.*” of Jan. 17, 1891, is a most important contribution to the subject. He began by remarking that up to the end of the year 1890 there had been twenty-one deaths from the treatment, and up to January 7 there had been six or seven more. His assistants had, besides, made a large number of necropsies in other hospitals and in private.

It is evident (*post-mortem*) that the effect of the lymph injections is to cause very acute irritation, redness and swelling, in the affected parts. These are not merely transient swellings, but intense active proliferations, especially round the edges of ulcers and in the neighbouring glands. Leucocytosis is also very great. These swellings are often dangerous, and may be especially so in the larynx, causing very violent, even phlegmonous inflammations. New tubercular foci are set up at a distance, and acute inflammatory pneumonic changes. New small tubercles, speedily giving rise to ulcers, have appeared under the eyes of the observer in the laryngeal mucous membrane, and all these submiliary new tubercles remain uninfluenced by injection. Probably the tubercle bacilli are set free, and reach parts at a distance by metastasis.

The necrotic effect does not occur universally; submiliary tubercles resist the remedy in many places, and even large tubercles are refractory. Perforation of the intestine is very likely to occur rapidly, and in the respiratory organs disintegration rapidly takes place, and the size of the loosened masses is sometimes altogether out of proportion to the ability of the patient to expel them. All kinds of complications from retention and aspiration will be caused. In one case of tuberculosis of the larynx, though twenty injections had been given, a fresh eruption of tubercles of extreme intensity extended over the whole of the larynx and trachea.

In an article in the "Gazette des Hôpitaux," attention is drawn to the histological *post-mortem* signs of intense inflammation produced round tubercular foci by injections of Koch's lymph. How can this peri-tubercular acute inflammation be useful? It is difficult to see any beneficent action if the vitality of the bacilli is not diminished, or if the organism does not become capable of getting rid of them when the tissues have been stimulated in this fashion. Even Koch himself is not certain that general or even local reaction should be obtained. Certain unfortunate cases have occurred, sufficient to singularly cool the enthusiasm of the most confident. Of these a case is cited:—A young and strong man was under treatment for erythematous lupus of the face, and he presented no sign of pulmonary phthisis. Four injections seemed to improve the lupus, but after a further injection violent hæmoptysis occurred, and blood-spitting lasted for some days, the chest becoming full of sibilant râles; the patient also becoming markedly enfeebled. A case is also cited of the death of a young girl in Vienna (reported by Dr. Jarisch) within thirty-six hours after one injection of two milligrammes for lupus of the face. "The lymph is doubly dangerous both from its toxic properties" and from the inflammatory reaction it determines around tubercular "foci."

Sollier thus summarizes the results obtained by Prof. Cornil, at the Hôpital Laënnec:—"Useless in surgical tuberculosis, rather harmful in "pulmonary tuberculosis, uncertain from a curative point of view in lupus "and cutaneous tuberculosis, this is the summary of Koch's method, "such as is derived from the conscientious, methodical and rigorously "scientific experiments of M. Cornil."

The writer in the "Gazette des Hôpitaux" concludes with the expression that "Koch's lymph ought, then, to return to the laboratory whence it has "emerged too prematurely."

R. Norris Wolfenden.

Loomis, H. P.—*A Study of the Koch Method in Berlin.* "Med. Record," New York, Dec. 27, 1890.

As the result of his observations, Dr. Loomis offers the conclusions that it is as great a medical discovery as that made by Jenner; that it opens up a hitherto unknown field in the treatment of disease which no one at the present time can limit; that it apparently cures lupus. With regard to its curative power in pulmonary tuberculosis, he quotes the answers made to a series of questions by Professor Leyden.

1. Have you noticed any *permanent* improvement in cases of early phthisis following the use of the remedy? Yes, but time can alone show how frequent such cases are.

2. Have you seen improvement in advanced cases? Yes, in some.

3. Would you use the remedy on your own child? Yes.

4. Do you favour its use in private practice? Yes.

5. Have you seen any disastrous results following its use? Yes, in unsuitable cases and in over doses.

6. What precautions should be taken? Employ small doses until personal effects are noted. Begin with one to two or five milligrammes.

7. Do you continue constitutional treatment while using the remedy

By all means. We have to do with a most extraordinary remedy, whose specific action is on *local* processes, not constitutional.

8. Would you give the remedy to a child? Yes, in half milligrammes.

9. What is its diagnostic value? It has no *positive* diagnostic value in all cases.

Dundas Grant.

Lennox Browne.—(Reported by Dr. Dundas Grant.)

THE evidence concerning the efficacy or at least the activity of Dr. Koch's remedy for tuberculosis is supported by the observations made recently on some patients in the Central London Throat and Ear Hospital. Mr. Lennox Browne gave a clear account of the confirmatory results obtained in these cases in a lecture delivered by him on the 23rd of December. In two cases of lupus the local reaction presented the characteristic and now classical appearance, and the general reaction to even rapidly increasing doses of the lymph was of a palpable though mild type. The "affinity" of the remedy for lupus-tissue was proved beyond question. Whether the effect is greater than that produced on lupus by a local erysipelas is still uncertain. At the same time the results shown by Mr. Lennox Browne quite bear out all that has been advanced.

The most striking case was one of typical laryngeal phthisis under the care of Mr. Jakins. In this case the pain in swallowing had for seventeen days been so great as to preclude the taking of the softest food, except after the application of cocaine. The epiglottis was normal, but the infiltration of the ary-epiglottic folds was most typical. Twenty-four hours after injection the patient asked for a mutton chop, and swallowed it. Most laryngologists have effected, at some time or other, a similar degree of relief by means of cocaine, menthol, cold "Leiter" coils, or some other appropriate local treatment. In the case shown, however, none of these adjuvants were employed, and the result seemed to be wholly and solely due to the action of the lymph. Mr. Browne professed inability to explain the *modus operandi*, but offered the suggestion that the lymph had the anodyne properties of the ptomaines. In another case, with a bad family history and two attacks of hæmoptysis, though without any definite physical signs of phthisis, it was considered justifiable to perform injections cautiously with a view to testify the freedom of the patient from tuberculous disease. Injections increased in strength up to one centigramme (0.01 gramme failed to produce reaction).

A very interesting application of the injection, with a diagnostic rather than a therapeutic view, was its employment in the case of a middle-aged woman, who looked considerably older than her years, the subject of a tough swelling of the concha of the left auricle, approaching in appearance a hæmatoma, but so much more suggestive of a syphilitic lesion that antisymphilitic remedies were freely tried. No response took place, and on it being noted that she had on her face the scars of lupus, successfully treated by local measures some years before, it was resolved to try whether reaction would take place under "Koch" injections. The general reaction was slight, but the tumour reddened and desquamated to an extent sufficient to justify a reasonable surmise that the disease was of a "lupoid" nature and a suitable one for continuous treatment by the

same method. The improvement in this patient's general condition and appearance after a fortnight's course was quite remarkable.

"One swallow does not make a summer," and conclusions must not be jumped at on the strength of a small number of cases observed for a short time only. There remains, however, the fact of the activity of the remedy, and the more it is observed the more cautious, we are sure, will the practitioner become in his use of it. He must be a rash man who would risk the waking up of some dormant mischief lurking unobserved at the base of the brain, or in the kidneys, for instance, in the early—the eligible—stage of a disease which in itself runs not infrequently a favourable course, without taking every possible precaution to assure himself—if it can be done—of the freedom of every part of the organism from the tubercle *in esse* and *in posse*. It is in surgical rather than in medical tubercle that it seems to have its sphere, and in lupus more than any other form of tuberculous disease, being least frequently associated with tubercle of vital parts. It remains to be seen whether the effects are more lasting than those produced by direct local treatment of the affected tissues.

MOUTH, PHARYNX, ŒSOPHAGUS, &c.

Graham, J. T.—*Gangrenous Stomatitis*. "Med. News," Jan. 10, 1891.

A LETTER recording the case of a child of eight, six weeks ill from typhoid fever and cancrum oris. Both eyes were destroyed by purulent ophthalmia. The opposite cheek became involved, several teeth and portions of the maxillary bone (inferior) were lost. In three weeks the patient recovered, remaining, however, totally blind, and a fibrous adhesion between the cheek and lower jaw on the right side partially closes the mouth.

R. Norris Wolfenden.

Page (Newcastle-on-Tyne).—*Tumour of the Palate*. "Lancet," Jan. 10, 1891.

A TUMOUR of the size of a hen's egg, two years in growing, causing obstruction for three weeks, occupying the isthmus faucium, springing from the left side of the throat. Its deep connections could not be made out. The mucous membrane was stretched over it and thinned, but there was no sign of ulceration, and no enlargement of the glands. Laryngotomy, plugging of pharynx, incision through the mucous membrane, enucleation with the finger, were followed by cure and discharge in fourteen days. Four years later there was no recurrence. The microscopical structure was glandular tissue—adenoma—with spindle-cells sparsely interspersed. A number of such cases have been tabulated by Stephen Paget (St. Bartholomew's Hospital Reports, 1886).

Dundas Grant.

Kersting (Würzburg).—*Contribution to the Pathology of the Lingual Tonsil*.

"Monats. für Ohrenh.," 1890, No. 9.

THE author has made out a relationship between the diseases of the lingual tonsil and those of the other adenoid tissues. Such affections are

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often found in combination. Phlebotomies of the lingual tonsil are more common in old people. *Michael.*

Jessop (Leeds).—*Unilateral Lymphangioma of the Tongue.* "Brit. Med. Journ.," April 5, 1890. Leeds and West Riding Med. Chir. Soc., March 21, 1890.

THIS was the case of a young girl, with a growth mainly on the surface of the tongue having a certain resemblance to a coarse papilloma. It was said to be congenital. *Hunter Mackenzie.*

Bakai.—*Case of Lymphadenitis Retropharyngealis.* "Königliche Gesellschaft der Aerzte," Buda-Pesth, Oct. 18, 1890.

THIS occurred in a child of eight months, and the tumour caused attacks of suffocation. On incision no pus was discharged. Tracheotomy had to be performed. The tumour disappeared later on without suppuration, and after four days the canula could be removed. Recovery followed. *Michael.*

Smith, Frederick (Dublin).—*Congenital Stricture of the Œsophagus in a Puppy.* "Brit. Med. Journ.," March 1, 1890.

THE Œsophagus had an hour-glass contraction about its middle, the contraction scarcely admitting a pin; above this was a largely dilated pouch, containing an ounce of undigested food. During life a fulness about the neck had been observed, any accidental pressure on which usually excited regurgitation. *Hunter Mackenzie.*

Kholshavniskoff, P. N. (Cronstadt).—*Case of Cancer of the Œsophagus perforating the Aorta.* "Meditzinskia Prib. k' Morsk. Sborn.," 1890, No. 1, p. 20.

A WORKING man, aged fifty-six, suffering from malignant disease of the gullet, suddenly died about a week after his admission to the local naval hospital. At the *post-mortem* examination the Œsophageal lumen, eight centimètres above the cardia, was found plugged with a dense blood-clot, after the removal of which there was exposed an ulcer, measuring 6·5 centimètres in length, and 6 in breadth, and covered with a dirty-red detritus. In the upper angle of the ulcer there was an opening, 1 centimètre in diameter, filled up with a coagulum, and communicating with the lumen of the thoracic aorta, 4·5 centimètres below the orifice of the left sub-clavian artery.

The aortic wall at the site of the perforation was firmly adherent to the Œsophagus, the intima around the hole being widely detached from the subjacent coats. The posterior mediastinal lymphatic glands were enlarged, indurated, on section of a milk-white colour, some of them presenting central patches of caseous degeneration. The stomach contained about seven fluid pounds of semi-coagulated dark blood. In the left parietal region posteriorly there was found a somewhat elastic, smooth, immovable hemispherical tumour, 7 centimètres in diameter, perforating the cranium, and adherent to the dura and pia mater. Both the neoplasm and Œsophageal ulcer proved to be typical epitheliomata.

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The writer points to the extreme rarity of the case. International literature is said to contain only four other instances of œsophageal cancer perforating the aorta. Such cases were published, one by Bugnoy ("Bulletin de la Société Anatomique de Paris," 1855, p. 280); another by Lancereaux (*ibid.*, 1861, p. 296), in whose patient the perforation was situated 8 centimètres above the commencement of the aorta; and two by Prof. Zahn, of Geneva ("Virchow's Archiv," vol. 117), in one of whose cases the vessel was perforated just below the origin of the left sub-clavian artery, and in the other 4.5 centimètres below that level (that is exactly as in the author's case). All the four cases referred to men, aged from forty-two to sixty. [The author's collection is very far from being complete. Thus, according to Dr. R. Neale's "Medical Digest," Section 832 : 2, similar cases were recorded by Drs. Neil and Coupland. Another case was observed by Dr. N. E. Krusenstern (*vide* the "London Medical Record," March, 1887, p. 90), etc.—Reporter.]

Valerius Idelson.

Grubert (St. Petersburg).—*Œsophagotomy for the Removal of an Impacted Foreign Body.* "Petersburg Med. Woch.," 1890, No. 44.

A SOLDIER, twenty-seven years of age, swallowed a piece of meat with a bone attached. This could not be removed *per vias naturales*. Two days later, œsophagotomy was performed, and the bone was removed from the jugular region, where it was impacted. Recovery followed.

Michael.

Chavasse.—*Diverticulum of the Œsophagus.* Path. Soc., Jan. 20, 1891. "Brit. Med. Journ.," Jan. 24, 1891.

THE author showed a specimen taken from the body of a man, aged forty-nine, who was much emaciated, and on whom gastrotomy was performed at the Birmingham General Hospital in July, 1890, as an endeavour to arrest starvation. The patient had given a history of dysphagia extending over a period of ten years. Death took place two days after the completion of the operation, from pneumonia and exhaustion. The *post-mortem* examination revealed a posterior diverticulum four inches in depth from the level of the arytenoid cartilages, three and a half inches in breadth, and two and a half inches in thickness, with a mouth one inch in diameter, and a capacity of six ounces. The walls of the sac were as thick as those of the œsophagus, and lined throughout with mucous membrane. When filled with fluid the opening in the œsophagus was firmly closed by the pressure of the distended sac. There was no malignant growth present. It was pointed out that the absence of muscular tissue, except at the mouth of the sac, supported the contention of Zenker and Von Ziemssen that these posterior diverticula were primarily due to the effects of pressure, and not to a congenital defect as held by some authorities.

R. Norris Wolfenden.

NOSE AND NASO-PHARYNX.

Messiter, M. A. (Birmingham).—*Fibro-Sarcoma of Upper Jaw.* "Brit. Med. Journ.," March 15, 1890. Midland Med. Soc., Feb. 26, 1890.

SPECIMEN shown. It had been removed by operation from a woman, aged forty, from whom some nasal polypi had been taken four years previously.
Hunter Mackenzie.

Miller, A. G. (Edinburgh).—*Trephining for Abscess of the Frontal Sinus.* "Brit. Med. Journ.," Feb. 22, 1890. Edin. Med. Chir. Soc., Feb. 5, 1890.

EXHIBITION of a young man, whose frontal region had been trephined on account of obstinate pain over that region. Some teeth had previously been removed, and pus had escaped from the antrum, but a complete cure had not ensued. Trephining in the middle line of the nasal frontal region relieved pus, after which the patient was finally cured.
Hunter Mackenzie.

Spencer (London).—*Acute Syphilitic Necrosis of the Superior Maxilla.* "Brit. Med. Journ.," March 22, 1890. Clin. Soc. of London, March 14, 1890.

EXHIBITION of a woman, aged twenty-six, with this disease. The antrum of Highmore opened into the mouth.
Hunter Mackenzie.

Schütz (Mannheim).—*Contribution to the Pathology of the Antrum of Highmore.* "Monats. für Ohrenheilk.," 1890, No. 11, Supplement.

THIS is the report of a second case of empyema of the antrum following the extraction of a carious tooth.
Michael.

Jackson, Thomas (Hull).—*Mumps.* "Brit. Med. Journ.," March 22, 1890. THE author calls attention to mumps and parotiditis as sequels of influenza.
Hunter Mackenzie.

Klingel (Heidelberg).—*Diagnosis of Empyema of the Antrum of Highmore.* "Monats. für Ohrenheilk.," 1890, No. 9.

A CASE of purulent discharge from the nose simulating empyema of the antrum really arose from caries of the middle turbinated bone. *Michael.*

Patrzek (Oppeln).—*Adenoid Vegetations in Adults.* "Deutsche Medicin. Zeit.," 1890, No. 25.

Adenoid vegetations do not always disappear in adults, but, owing to the naso-pharynx being much larger than in children, they often give rise to no symptoms. Sometimes nasal obstruction and nasal speech are caused by them even in adults. In such cases they must be removed.
Michael.

Davis, Henry (London).—*On the Question of Anæsthetics in Operations for Adenoid Growths in the Naso-Pharynx.* "Brit. Med. Journ.," April 12, 1890.

THE author recommends the use of an anæsthetic during the performance

of these operations. Ether, or in the case of young children, chloroform (alone or mixed with a small proportion of absolute alcohol) ought to be used in preference to nitrous oxide, the effect of which is too transitory. The head should be drawn well over the edge of the table—Howard's position.
Hunter Mackenzie.

Schaeffer (Bremen).—*Abscess of the Septum Nasi.* "Therap. Monats.," 1890, No. 10.

A BLOW on the nose sometimes gives rise to an abscess of the septum. The author has observed this in four cases. He recommends as treatment an elliptical incision through the mucous membrane, and the removal of necrosed cartilage by means of a spoon-probe, followed by the application of a cotton-wool tampon.
Michael.

Winckler (Bremen).—*On the Relationship of Stuttering to Nasal Disease.* "Wien. Med. Woch.," 1890, No. 40.

NASAL diseases are often observed in stuttering patients, and often also such abnormalities of the bones as are found in those who have suffered from nasal disease in childhood. Sometimes nasal disease is the cause of the stuttering, but, even in cases where this relation does not exist, the stuttering may be improved by treatment of concomitant nasal affections.
Michael.

Kahn (Würzburg).—*Hard Papilloma of the Nose.* "Wien. Klin. Woch.," 1890, No. 49.

THE author removed in several sittings, by means of the galvano-caustic snare, a reddish tumour with a papillated surface. The whole together amounted to the size of an egg. Microscopical examination proved it to be a hard papilloma.
Michael.

Dittrich (Elberfeld). — *Ulcus Perforans Septi Narium.* "Monats. für Ohrenheilk.," 1890, No. 11.

AN ordinary case of syphilitic perforation of the nasal septum. The author refers to the different causes of ulceration, and expresses the opinion that the non-specific perforations are caused by thrombosis of the arteries analogous to what occurs in ulcer of the stomach.
Michael.

Townsend, H. R. (Cork).—*Nasal Tumour.* "Brit. Med. Journ.," March 1, 1890. Cork Med. and Surg. Soc., Jan. 22, 1890.

A MIXED-CELLED sarcoma had been removed from the external surface of the nose, and the seat of the tumour had been covered by a piece of skin brought forward from the cheek. Very good result.

Hunter Mackenzie.

Asch, Morris J.—*An Operation for Deviation of the Nasal Septum.* "New York Med. Journ.," Dec. 20, 1890.

THE nostrils are first well washed out with a disinfecting solution, such as Listerine, or Dobell's solution, with the addition of thymol and eucalyptol. The patient is then etherised, and any adhesions between the septum and turbinated bones are broken down by means of a curved gouge. A

pair of strong cartilage scissors, so curved as to admit of closing without pinching the columna, and having one of the blades thick and quite blunt, are next introduced, the blunt blade into the obstructed nostril, the cutting one into the other. A crucial incision is made, as nearly as possible at right angles to the point of greatest convexity. The forefinger is then inserted into the obstructed nostril, and the segments of the septum are forcibly pressed into the opposite one until they are broken at their base, and their resiliency destroyed. The septum is next straightened by means of Adams' or other strong forceps, a tin splint wrapped in sublimated wool is introduced, and the nostril is plugged with gauze or wool similarly impregnated. This is left undisturbed for four days, and then changed two or three times a week for three weeks—any malposition being rectified—by which time the parts become permanently fixed, and in two weeks longer quite healed.

Dundas Grant.

Ball, J. W. (London).—*Case of Rhinolith.* "Brit. Med. Journ.," March 1, 1890.

THE patient was a child of four years. The rhinolith consisted of a nucleus about the size of a pea, evidently a vegetable substance, and coated with calcareous matter about one-eighth of an inch thick. It was removed by fine forceps under chloroform.

Hunter Mackenzie.

Knight, C. H.—*Rouge's operation for the Removal of a Nasal Sequestrum.* "Med. News," Jan. 3, 1891.

THE case is recorded of a mulatto with extensive syphilitic necrosis of the nose, intolerable ozæna, a perforation of the hard palate, loss of a portion of the alveolar arch with the incisor teeth of the upper jaw, destruction of the septum and turbinateds. A large sequestrum lying on the floor of the nose could not be removed by ordinary means, and was eventually got rid of by Rouge's operation.

The author discusses the operation, referring to a fatal case of Rouge's in which the perpendicular plate of the ethmoid was removed and the os panum gouged away for a centimètre. The woman died of pyæmic meningitis on the sixth day, the ophthalmic vein being proved to be occluded by a purulent clot. This fatal case cannot be taken as contra-indicating the operation. It has been favourably spoken of by Lucas, Cripps, and Howard (who has performed it in four cases). D'Azambrya recognises the possibility of phlebitis and purulent infection. Beverley Robinson quotes Trélat as condemning the operation on account of hæmorrhage, difficulty of performance, and inefficacy. Bosworth makes light of the operation and its risks. Knight remarks that the operation should never be undertaken until it is known for what purpose it is to be done. Syphilitic necrosis of the skeleton of the nose is the class of case in which it is typically indicated, for the early removal of large sequestra. Though apparently a formidable operation it is not really specially hazardous. Hæmorrhage may be copious, but can be controlled by pressure and the process of repair is rapidly completed without deformity.

R. Norris Wolfenden.

LARYNX, &c.

Wagner (Halle-a-S.) — *Photography of the Larynx and Buccal Cavity.*
 "Berliner Klin. Woch.," 1890, Nos. 50, 51.

A DESCRIPTION of the method and reproductions of two very well-executed photographs of the larynx. *Michael.*

Krieg (Stuttgart).—*Pachydermia Laryngis.* "Würt Med. Correspbl.," 1890, Band 60, No. 29.

THE author refers to the literature of the disease as first described by Virchow and Hünemann, and then relates seventeen cases in his own practice. Before he knew Virchow's views he described his cases as symmetrical thickening of the mucous membrane, combined with chronic laryngitis. In the first of his cases he thought there was commencing tuberculosis or neoplasm, but subsequently the symmetry and the characteristic depressions made it manifest to him that the disease was pachydermia. As regards the etiology, he found in nearly all his cases that there was alcoholism or overstraining of the voice, or both. All were males, except one—an opera singer. The prognosis is favourable; the voice in most cases not very hoarse. Cure often takes a long time. Sometimes in cases of tuberculosis or carcinoma there is an accessory condition of pachydermia. *Michael.*

Wolfenden, R. N. (London).—*Œdema of the Larynx, a Sequel of Influenza,*
 "Brit. Med. Journ.," March 8, 1890.

THE patient recovered after scarification and pinol inhalations.

Hunter Mackenzie.

Jacobson (London).—*Surgical Sequelæ of Fever.* "Brit. Med. Journ.," March 1, 1890. Harveian Soc. of London, Feb. 20, 1890.

TYPHOID fever was especially referred to. The author stated that laryngeal troubles were of disputed frequency, and believed that they occurred more often in some epidemics than in others. Parotiditis was of interest, not only on its own account but because it might be associated with any form of abdominal lesions. Dr. Sydney Phillips had recently seen three cases of laryngeal trouble, all in male adults.

Hunter Mackenzie.

Newman, David.—*Hæmoptysis in apparently healthy persons.* Glasgow Path. and Clin. Soc. "Glasgow Med. Journ.," Nov., 1890, and Jan., 1891.

FIVE cases are reported which had been under the care of the writer. In three, which had been under observation for four years, hæmoptysis was suspected to be from the lungs, but was proved to be from the upper air passages.

In one, quoted as an example of *phthisis ab hæmoptoë*, the blood was derived from the upper air passages, and inspired into the minute ramifications of the lung.

In a fifth case, hæmorrhage took place occasionally over a period of

fully three-and-a-half years, during which the patient was otherwise healthy, and no physical signs of pulmonary disease were discovered until within eight months of death.

The author wishes to demonstrate by these cases that hæmorrhage from the upper air passages may easily be mistaken for true hæmoptysis or bleeding from the pulmonary parenchyma, and the process by which hæmorrhage from one part may be simulated by bleeding from another renders the diagnosis in certain cases very difficult.

In every case a careful examination of all parts of the upper air passages for a lesion to account for the hæmorrhage should be made, and if none be found, the case should be treated as one of pulmonary disease.

J. Macintyre.

Newman, David (Glasgow).—*Case of Suppurative Laryngeal Perichondritis, without any antecedent Disease in the Larynx.* "Brit. Med. Journ.," March 29, 1890.

THE patient, a woman, aged forty-five, was admitted, suffering from hoarseness, inspiratory cough, and dyspnœa, of about three weeks' duration. She had had no previous important illness. Two days after admission the following condition was noted: "There is a marked "œdematous swelling of the mucous membrane, covering the arytenoid "cartilages and the false cords, so that only a narrow chink is left behind "them. During inspiration this opening is apparently not, but must in "reality have been, more than one-twelfth of an inch wide, and its edges "are thrown into vibration by the ingoing current of air. Upon expira- "tion the opening becomes wider, and permits of free exit of air. This "change is most marked upon the left side, the false cord being drawn "away from the middle line, so that a view is obtained of the left vocal "cord. The left vocal cord is seen to be fixed in the middle line, but no "view can be obtained of the cord on the right side."

The patient died about six weeks afterwards. Autopsy: "The "appearance of the larynx before cutting open confirms the laryngoscopic "view, but adds nothing to it. On splitting up the cricoid cartilage "from behind, and opening the larynx, the posterior surface of the "cricoid cartilage is seen to be distinctly eroded a little to the left of "the posterior middle line. The right cord is nodular, and immediately "below it there is an opening into an abscess cavity of small dimensions, "which reaches down the trachea for about half an inch. In addition "to the œdema the mucous membrane of the whole larynx is infected."

The author considers the case peculiar in regard to the obscurity of the disease, the symptoms not being those usually met with in perichondritis, and also in regard to there being no apparent cause for what might be regarded by some as a spontaneous suppuration between the perichondrium and the cricoid cartilage. He then discusses these points in detail.

Hunter Mackenzie.

Kidd, Percy (London).—*On a peculiar Obstructive Form of Laryngeal Tuberculosis, which simulates Bilateral Abductor Paralysis.* "Brit. Med. Journ.," March 29, 1890.

THE author has met with six examples of this condition, and in the present paper he gives an account of two of his cases.

He affirms that these cases prove the existence of a form of laryngeal tuberculosis in which the danger to life is out of all proportion to the degree of infiltration of the larynx or lungs. The severity of the disease depends on the persistent approximation of the vocal cords in the position of phonation. He inclines to think that the impaired mobility is due to infiltration in the neighbourhood of the arytenoid cartilages, and to structural changes in the vocal cords themselves.

In five cases tracheotomy was performed. The patients lived from six weeks to six months after the operation. As a general rule the author does not approve of the performance of tracheotomy in laryngeal phthisis.

The author concludes by affirming that fixation of the vocal cords in the median position, simulating bilateral abductor paralysis, may occur in tubercular disease of the larynx, as the result of three different causes :—(1) Plastic infiltration around the arytenoid cartilages, leading to adhesive perichondritis and spurious ankylosis. (2) Ulceration, followed by morbid adhesion of the altered vocal cords. (3) Suppurative crico-arytenoid arthritis ; and probably (4) Non-suppurative adhesive arthritis. He emphasizes the value of tracheotomy or some other surgical measure in such cases.

Hunter Mackenzie.

Chiari.—*Septic Phlegmon of the Epiglottis—Tracheotomy—Recovery.*

THE patient, sixty-seven years old, was suddenly attacked with pain in the throat and fever. The laryngoscope showed the epiglottis to be red and swollen. An incision with a laryngeal knife gave vent to foetid pus and blood. Next day the larynx was so swollen that the patient was cyanotic, and tracheotomy had to be performed. The operation was complicated by the shortness of the patient's neck, which made it difficult for a canula to be retained. Broncho-pneumonia supervened, but the patient recovered.

Michael.

Schaeffer, Max (Bremen).—*On Heryng's Curettement of the Larynx.* "Therap. Monats.," 1890, No. 10.

THE author restricts the use of this treatment to such cases as are complicated with stenosis of the larynx from extension of granulations, such as could be cured by the use of lactic acid with good general health and the necessary power of resistance. He has applied the treatment in six cases, and in four of them with very good results.

Michael.

Rauchfuss.—*Intubation of the Larynx.* Meeting of the Aerztl. Verein in St. Petersburg, April 16, 1890.

THE author showed O'Dwyer's instruments. He had applied the method in ten cases, of which six died. In two of the remaining cases of recovery, tracheotomy had to be performed. The intubation in all the cases gave great comfort. He recommends this plan of treatment in suitable cases.

Michael.

Grünwald (Munich).—*Death subsequent to the Extirpation of a Laryngeal Polypus.* "Monats. für Ohrenheilk.," 1890, No. 10.

THE following case, fortunately a unique one, deserves to be reported *in extenso*. A man, seventy-three years of age, with thickened

arteries, was totally aphonic. The laryngoscope showed on each vocal cord a red sessile, broad-based tumour. These were removed in five sittings by means of the wire and the laryngeal knife. On microscopical examination they were found to consist of connective tissue covered with pavement epithelium. Four months later, recurrence called for operation; and again, after six months, a second recurrence took place. There was then a broad-based tumour on the right vocal cord, and a smaller one in the anterior angle. These were removed with snare and knife. Fourteen days later the tumour on the left vocal cord was operated on but not completely removed. Slight bleeding followed, but ceased in a few minutes. Half an hour later, the patient returned with bleeding which could not be stopped, coughing up every five minutes from five to ten cubic centimetres of blood. A floating tumour could be seen hanging loose in the larynx, and was removed by means of the galvano-caustic snare, but the hæmorrhage still persisted. The writer endeavoured to stop the bleeding by means of the galvano-cautery, but without effect. The patient was then transferred to the surgical wards for thyrotomy to be performed. This was done after prophylactic tracheotomy, and the larynx was plugged with iodoform gauze. Some hours later the patient was quite well, and removed the plug without the hæmorrhage returning. Next day he unexpectedly died of collapse. Such a case is too rare to be considered as any contra-indication for operation.

Michael.

Witzel (Bonn). — *The use of Portions of Skin to remedy defects in Mucous Membrane, especially in Laryngoplasty.* "Centralblatt für Chirurgie," 1890, No. 45.

IN a patient, forty-nine years old, half of the larynx was extirpated for carcinoma, the cricoid cartilage being retained. After the removal of the neoplasm, a piece of the skin of the neck was fixed by means of sutures in the larynx as a substitute for the extirpated vocal cord. The patient was able to speak with a fairly good voice on the twentieth day after the operation.

Michael.

Rostoshinsky, R. P. (Kosloff). — *Tracheotomy in a dying Patient with Syphilitic Disease of the Larynx.* Proceedings of the Tamsov Medical Society, 1890, No. 2, p. 35.

THE author records a case of a male peasant, aged thirty-four, a syphilitic of three years' standing, who was admitted to the Zemsky hospital on account of an agonizing, barking cough, with scanty expectoration, aphonia and asphyxic attacks, occurring mainly at night and causing sleeplessness. The laryngoscope revealed multiple dirty-looking ("tallow-coated") ulcers, scattered along the free edges of the epiglottis and both of the vocal cords. On the third day after his admission, the man was found lying on his bed in an unconscious state, breathless, "quite blue all over," with a hardly perceptible intermittent pulse.

The case being most urgent, the author proceeded to perform tracheotomy on the spot. Having come across the thyroid isthmus, he divided the latter, secured its edges with Péan's pincettes, then opened

the windpipe, inserted a canula, and sucked out blood from the trachea by means of Nélaton's catheter. Neither breathing nor cough appearing, the author began to stimulate the tracheal mucous membrane by moving the instrument to and fro, whilst his assistants performed artificial respiration.

After awhile, normal respiratory movements set in, cyanosis disappearing fifteen minutes later.

Beyond some fever for the first six days, the after-course was satisfactory, the patient being discharged well (with the canula *in situ*) three weeks after the operation. *Valerius Idelson.*

Savill (London).—*Abductor Paresis of the Vocal Cords.* "Brit. Med. Journ.," March 22, 1890. Clin. Soc. of London, March 14, 1890.

EXHIBITION of a woman, aged forty-five, with this affection. She showed no indication of phthisis or local tumour. *Hunter Mackenzie.*

Rosenbach (Breslau).—*Functional Paralysis of Phonation in Speaking.* "Deutsche Med. Woch.," 1890, No. 46.

THE author distinguishes three classes of cases. (1) Those of true alalia, where no attempt to speak is made. (2) Those in which the lips move, but there is no action of the larynx. (3) Those in which the patient contracts the abdominal muscles, but without putting the glottis into the state necessary for the production of sound. He points out the necessity of differentiating these classes, as the treatment is different, and gives a full theoretical account of the forms of the disease. *Michael.*

Kayser (Breslau).—*Prophylaxis against Spasm of the Glottis, following Endo-laryngeal Manipulations.* "Therap. Monats.," 1890, No. 10.

By a number of rapid, deep inspirations it is possible to produce apnœa. Acting upon this, the author, before commencing laryngeal operations, directs the patient to take ten deep inspirations very rapidly. After this he is apnœic and does not require air for two minutes. In this way he has no trouble even if spasm of the glottis arises and prevents respiration for some time. *Michael.*

Exner.—*Function of the Superior Laryngeal Nerve.*—Meeting of the Gesellschaft der Aerzte, Vienna, Nov. 7, 1890.

By section of the superior laryngeal nerve in a horse, Exner produced paralysis of all the laryngeal muscles of the same side, in spite of the fact that it is not a motor nerve. Microscopic examination of the muscles showed the degeneration called by Erb "dystrophia musculorum progressiva." *Michael.*

West, Samuel (London).—*Bronchial Casts from Bronchitis Crouposa.* "Brit. Med. Journ.," March 22, 1890. Path. Soc. of London, March 18, 1890.

IN connection with this subject, the author mentioned that recently there had been a tendency to consider all membranous exudations of the larynx, trachea, and bronchi as of diphtheritic origin. The President (Dr. Dickinson) thought no one would suggest that all membranous exudations were of diphtheritic origin. He mentioned the case of a lady

in whom a membranous exudation had formed in the larynx from the irritation of eau-de-Cologne. Dr. West, in reply, said that he knew no way of distinguishing the different exudations, chemically or histologically, though he believed that plastic bronchitis and diphtheria were perfectly different diseases.

Hunter Mackenzie.

Chiari.—*Diverticulum of Bronchus.* Verein Deutscher Aerzte, Prague, Oct. 17, 1890.

A UNIQUE case of diverticulum of the right bronchus, measuring one centimetre in length, was shown by Chiari.

Michael.

Schroetter.—*Contribution to the Etiology of Pulmonary Gangrene, and Remarks on the Anatomy of the Large Bronchial Tubes.* "Wien. Med. Woch.," 1890, No. 45.

A PATIENT, aged fifty-three, suddenly became feverish with rigors, pain in the chest, and feeling of illness. Fourteen days later, he expectorated a foetid, putrid sputum, containing pulmonary epithelium and fibrous tissue. This was followed, after some weeks, by the expectoration of feathery particles of flesh. The patient then recovered. The expectorated pieces contained connective and elastic tissue, but it could not be said with certainty if they were portions of lung tissue. It seemed probable that they were particles of meat swallowed by the patient some months previously. The writer makes further remarks on the relatively greater frequency of the entrance of foreign bodies into the right bronchus.

Michael.

Clark, Sir Andrew.—*The Convulsive Cough of Puberty.* "Lancet," Dec. 20, 1890.

CASES of violent attacks of coughing at the period of puberty, often suggestive of the barking or the howling of a dog, whence the name suggested—*"Cynobex Hebetis."* No local changes are clinically detectable, nervousness is not always present; the only constant feature seems to be the period of life at which it occurs. The attack is frequently followed by a dazed or giddy condition, and by the passage of a quantity of limpid urine. The author attributes it to the rapid increase of evolutionary activity in the nervous system and in the laryngeal region. The course of the affection is tedious, but ends ultimately in recovery. As regards treatment, much importance is attached to diet and regimen. Local applications to the throat of morphia or cocaine, combined with oxychloride of bismuth and glycerine of borax, after each meal and at bedtime, and internal administration of syrup of the bromide of quinine and iron, with small doses of arsenic, or a pill of reduced iron, valerianate of zinc, nuxvomica and belladonna. The last drug has to be increased in dose till the physiological effects become apparent, and then, slightly diminished, the amount administered should remain at that level. Sir Andrew Clark is not in favour of sea-voyages for this affection. He dwells on the necessity of fostering in the subjects the acquirement of a higher degree of moral tone and courage.

Dundas Grant.

THYROID GLAND, &c.

Jalland (York).—*Enlargement of Right Lobe of Thyroid—Removal—Recovery.*

“Brit. Med. Journ.,” March 1, 1890.

THE patient, a lad, aged nineteen years, had noticed the lump on the right side of his neck about eighteen months previously. As the usual routine remedies had failed to influence it, and the breathing was becoming embarrassed, it was removed by an incision about three or four inches long over the right lobe, parallel with the sterno-mastoid. Some large vessels were found in the fascia of its deep connections, which were ligatured. The tumour was about the size of a closed fist, and consisted of fibroid tissue with a small cyst, containing dark venous blood in the centre. He made a good recovery.

Hunter Mackenzie.

Smith, J. W. (Doncaster).—*Case of Carcinoma of the Thyroid.* “Brit. Med. Journ.,” March 1, 1890.

THE patient, a woman aged forty-seven, had suffered from bronchocele from the age of fourteen years. It had grown till the age of twenty; then it had remained stationary until three months before admission. The recurrence of growths was caused by the patient striking her neck against the shaft of a cart; she became faint and ill, and the thyroid became swollen and discoloured. It ultimately burst, and discharged a sanguineous fluid. An operation could not be performed. Death soon ensued. (No microscopic examination.)

Hunter Mackenzie.

Cahill.—*Tumour involving Œsophagus and Trachea in the Neck.* “Brit. Med. Journ.,” Dec. 20, 1890.

THE author showed, at the Pathological Society's meeting of December 16, a specimen taken from a woman aged forty-nine, which consisted of larynx, trachea, and bronchi, with the upper two-thirds of the œsophagus. Immediately below the cricoid was a tumour two inches long embracing the œsophagus and sides of the trachea. It penetrated the œsophagus, constricting this tube, and also penetrated the trachea posteriorly and at the sides. Another large tumour was situated immediately below the bifurcation of the trachea adherent to the bronchi and pulmonary vessels, partly caseous and partly lymphomatous. The lungs contained numerous small tubercles. The other viscera were healthy. Lymphatic glands elsewhere were not enlarged. Increasing dysphagia and dyspnoea existed for six months before death, and paralysis of the right cord appeared four months before death, both vocal cords being affected two months later. The growth, thought at first to be carcinomatous, appeared, microscopically, to be of a lymphomatous nature, and analogous to the glandular mass in the posterior mediastinum.

Mr. Bowlby referred to a case, previously exhibited by Messrs. Treves and Silcock, of epithelioma arising from the bronchial clefts, and he considered the growth in Mr. Cahill's specimen to be epitheliomatous, and not tubercular or lymphomatous.

R. Norris Wolfenden.

Pitts, B. — *Substernal Growth arising in Accessory Thyroid.* "Brit. Med. Journ.," Dec. 20, 1890.

At the Pathological Society (December 16, 1890), Mr. Bernard Pitts showed a specimen removed from a man, aged fifty-four, in January, 1888. A swelling above the sternum had existed for seven or eight years, and had latterly rapidly increased. At the commencement of 1888 he was seized with a choking fit while walking. A swelling was just visible in the median line of the neck, immediately above the sternal notch; on deep inspiration some stridor occurred. The tumour was easily removed. It showed ordinary thyroid structure microscopically. It had no connection with the thyroid gland and must have developed in connection with an accessory thyroid. It lay chiefly behind the sternum and flattened the trachea.

Mr. Berry thought that the specimen was a cystic adenoma of the thyroid, and not an accessory thyroid body, such growths being very rare. These tumours might be detached from the thyroid and then wander away. Mr. Pitts could not agree to this, and said that accessory thyroid bodies could be found in about one in twelve bodies when looked for.

R. Norris Wolfenden.

Robinson, A. H. — *Case of Gummata in the Sterno-Mastoid Muscle.* "Brit. Med. Journ.," Feb. 22, 1890. Clin. Soc. of London, Feb. 14, 1890.

THE patient was a woman, aged twenty-five years. She had scars on the forehead, but none on the legs, and the liver was enlarged.

Hunter Mackenzie.

SOCIETY MEETINGS.

Berlin Laryngological Society.

Meeting of the 31st October, 1890.

P. HEYMANN showed a patient with *Abnormal Pulsation of the Trachea*, caused by an aneurism of the carotid.

FLATAU showed a case of *Chronic Recurrent Herpes of the Mouth and Pharynx*.

LUBLINSKI and KRAKAUER had seen similar cases.

B. FRAENKEL believed the case to be one of stomatitis aphthosa.

G. LEWIN narrated a case of herpes chronicus, which he believed to be syphilis, but the other symptoms of that disease were wanting.

ROSENBERG narrated a case of *Perverted Action of the Vocal Cords* treated by intubation.

Meeting of the 21st November, 1890.

LANDGRAF showed a case of *Granulation-Tumour of the Trachea*. The patient, thirty years of age, became suddenly hoarse, with symptoms of laryngeal stenosis and difficulty in swallowing. Laryngotomy was performed, and the tumour removed.

Meeting of the 5th December, 1890.

SCHORLER brought forward a patient from whom he had removed a *Piece of Bone Impacted in the Larynx* for ten days. *Michael.*

REVIEWS.

Gruber, Josef (Professor of Otology in the Imperial Royal University of Vienna)—*A Text-Book of the Diseases of the Ear*. Translated from the Second German Edition, by special permission of the author, and edited by Edward Law, M.D., M.R.C.S., and Coleman Jewell, M.B., M.R.C.S., with 150 illustrations, and 70 coloured figures on two lithographic plates. London: H. K. Lewis.

THE first edition of Gruber's text-book appeared in 1870, and in the second edition, published in 1888, the Master placed before the medical profession, in addition to the principles previously laid down, the results of the advancement of otological science as they presented themselves to his mature observation, results which he had in no small measure shared in bringing about.

The work commences with an elaborate description of the anatomy of the temporal bone and the different portions of the ear—in its widest sense. This amounts to a special treatise, and in the rendering of this somewhat dry portion of the subject clear and interesting to English readers the translators have availed themselves of the valuable services of Dr. Howden, lecturer on anatomy in the University of Durham. In such a chapter the reader of current German otological literature rushes naturally to those points which are unrecognised, or at least unnamed, in our own standard anatomical works, such as the *spina supra meatum*, about which the writers in Quain's "Anatomy" are discreetly silent. We find the required information on page 21, but as that includes the statement that the foramen is only found in 27 per cent. of adult temporal bones, we are gratified to observe that the author wisely relegates it to its proper obscurity, and makes no use of it in his specification of the landmarks for guidance in opening the mastoid cells and antrum. We think it unfortunate that other authors have been less considerate. The description of the muscles of the Eustachian tube is full and as satisfactory as usual. The reviewer feels that this does not amount to very much

and most cordially endorses the statement on page 82, "in this direction there still remains a considerable field for future observers."

In strange contrast with the lengthy and exhaustive anatomical chapter, occupying 107 pages, is the section headed "Physiological Observations," limited to six and a half pages (in small print, however), to which one turns with expectant interest. Short as it is, the section gives a well-condensed account of the physiological value (or otherwise) of the auricle, meatus, membrane, etc. The rich nervous supply of the membrane is alluded to, and the author quotes Gellé's interesting observation on loss of faculty for recognising the direction of sounds (orientation) when the sensibility of the membrane is lost. We do not observe any reference to the occurrence of anæsthesia of the membrane recognized in some cases of sclerotic median otitis. Helmholtz's theory, and its congeners, are critically handled, with the conclusion that experimental researches, no less than clinical observations, point by no means to a strict anatomical localization of the auditory perceptions—as of particular tones to particular fibres or rods. The semi-circular canals are accepted as peripheral organs for the maintenance of equilibrium, but play a part in the act of audition.

In the chapter on the examination of the patient, there is a full and very practical account of the subjective and objective symptoms and signs. *Paracusis Willisii* is a never-failing source of interesting speculation, and Gruber gives value to the view (held still more strongly by Urbantschitsch) that "hearing better in a noise" is partly a physiological condition of which those with abnormally diminished hearing are conscious, but insists that there must be also some particular pathological factor as well, as otherwise every patient with impaired hearing ought to present the symptom, which we know to be comparatively infrequent. In the examination of the structures of the oral cavity, he appears to admit the possibility of the tonsils being enlarged in an upward direction towards the tubes and pressing upon them, a relation of parts which our anatomists refuse to allow. In the next line he expresses what we consider the true effect of enlarged tonsils as such, namely: to "stretch the soft palate and interfere with the function of its muscles, etc.," hampering it, in fact, in its movements. The intimate association of aural diseases with morbid states of the naso-pharynx naturally leads to an account of the examination of these parts. Anterior rhinoscopy receives the classical amount of attention. The careful employment of the probe is recommended, but, strangely enough, the invaluable aid of cocaine is not here referred to. Zaufal's speculum does not find much favour. The introduction of posterior rhino-pharyngoscopy, much developed by Voltolini, is credited to our own eminent pioneer in otology, William Wilde. Gruber is more or less favourable to the use of Voltolini's palate-hook. A full and temperate account is given of the various known methods of inflating the middle ear, including the "so-called *Politzer process*." The author's method of limiting the action of the air-douche to one ear, namely, by bending the patient's head forcibly towards the opposite shoulder, is a "wrinkle" of some value.

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Eustachian bougies, and the precautions required in their use receive adequate notice.

In treatment, the author uses the process of injection through the catheter—with intact membrana tympani—more freely than we believe to be the practice in this country, and we cannot help thinking that the usual discomfort, the rarer pain and the very exceptional consequent inflammatory attacks more than counter-balance the comparatively questionable advantages (p. 199).

A practical point in the diagnosis between long-standing eczema of the meatus and otitis externa diffusa is that in the former perforation is unusual, but in the latter seldom absent (p. 228). Otitis externa is thoroughly discussed. In the circumscribed form (furuncle) Gruber uses small gelatine cones ("amygdalæ aurium"), medicated with extract of opium or hydrochlorate of morphia. He professes to have much less frequent resort to scarification since the adoption of this plan of treatment. Singularly, no mention is made of cocaine in the therapeutics of this troublesome affection. He points out the comparatively great frequency of diffuse external otitis in children, whereas in adults the circumscribed form is proportionately more common. The appearances of the membrana tympani in its normal and pathological conditions are portrayed in two chromo-lithographic plates, each containing thirty-five figures. These are exceptionally good specimens of the delineation of these difficult subjects. In complete occlusion of the meatus, indications for operation are chiefly well-grounded suspicions that suppuration is going on beneath. In such cases, incision, dilatation, galvano-cautery or drill may be required. We are surprised that the classical and generally straightforward operation of opening the mastoid is not mentioned in this connection. The chapter on perforations and artificial drums is most satisfactory. The subject of exostosis in the meatus receives rather scant justice in a work where all else is so well and fully treated. The cholesteatomata, of which so much has recently been written, are looked upon by Gruber as neoplasms, and not simply as masses of desquamated epithelium. Possibly the difference may be more in the use of terms than in fact, but he appears to differ in this view from many German otologists.

The indispensability of the treatment of affections of the neighbouring regions in middle-ear catarrh is inculcated, and the methods, though not new to rhinologists, are well described. The danger of the production of anosmia by the application of astringent lotions to the nasal mucous membrane is referred to, and the loss of the special sense is said to be only transitory. We are inclined to think it is in some cases permanent.

The results of middle-ear suppuration are described with interesting detail. "Gravitation-abscesses" in the palate, the retro-pharyngeal connective-tissue, the parotid gland, the lateral cervical region, etc., the mastoid process and its periosteum, the cranial cavity, &c., are brought before the reader with considerable clearness. In regard to abscesses behind the ear, the author gives the rule that those opposite the upper third of the auricle should be opened from the auditory meatus, those

in the region of the lower two-thirds over the mastoid process. If the abscess opens spontaneously in the wrong place and appears slow in closing, he makes a counter-opening in the right place. Interesting cases of exfoliation of the cochlea, with preservation of hearing for all the notes of the scale, are quoted. The author accepts Schwartze's indications for perforation of the mastoid. As counter-indications he allows extreme prostration, or the concurrent presence of some other affection destroying all prospects of recovery. Tuberculosis he does not consider a counter-indication, and rigors, vomiting, vertigo, cervical pain and high fever furnish reasons for, rather than against, operating. "Focal symptoms, on the other hand, such as aphasia, unilateral contraction or paralysis of the extremities or clonic spasms, are good grounds for relinquishing it, as insisted on by Schwartze, unless extraordinary circumstances should enjoin otherwise. It will be scarcely too much to say that the symptoms mentioned as contra-indications for operation will in the course of time be probably held to be of less significance in this respect"—a prediction which even already is within more than measurable distance of verification.

Space does not permit of further analysis of this extensive and valuable work. English readers of otological writings owe a debt of gratitude to Drs. Law and Jewell for having placed at their service so clear and readable a translation. The book is admirably got up in every way, and as complete as any text-book of a rapidly developing science can be.

Dundas Grant.

Schnitzler, Prof. John (Vienna). — "Klinischer Atlas der Laryngologie," &c. ("Clinical Atlas of Laryngology and Rhinology, with an Introduction on the Diagnosis and Therapeutics of the Diseases of the Larynx, Trachea, Nose, and Naso-Pharynx.") With the collaboration of Dr. Hajek and Dr. A. Schnitzler. First part, with thirty-two illustrations, contained in four chromolithographic plates, and twenty-four wood-cuts in the text. Vienna, 1891: W. Baumbler.

It is a special pleasure to the reviewer to recommend this new illustrated work of his venerated teacher, Professor Schnitzler, feeling that he can do so most conscientiously. While acting as his assistant, he had the opportunity of copying the originals executed by the artistic hand of Heitzmann, and so learned to draw from nature. Having seen some of the cases here reproduced, he is all the more inspired with admiration for the painter's work. The greatest credit is, however, due to the chromolithographer for the remarkable similarity of his work to the originals. The text of this, the first part, written by Drs. Hajek and Arthur Schnitzler, gives a history of laryngoscopy, and describes in a clear manner the method of examining the larynx and trachea, the nose and the naso-pharynx, with illustrations in black and white of the different illuminating apparatus, anatomical sections, normal appearance of the organs, and the various instruments for examination. The illustrations, accompanied by a short description of the disturbances of circulation in

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the larynx, show the normal larynx and trachea in different positions, hyperæmia and anæmia of the larynx, hæmorrhages in the mucous membrane and the vocal cords, catarrh of the larynx, œdema and swelling of the different parts, laryngeal abscesses, "Sängerknöten" and pachydermia. Characteristic specimens of the various affections have been selected for illustration, and there is no doubt that the succeeding parts, the publication of which is promised in a short time, will be equal in quality to the present one, so that this instructive work will have to be procured by all our *confrères*.

Michael.

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DEVIATIONS OF THE NASAL SEPTUM.

By Dr. JOHN SEDZIAK, of Warsaw.

By the general term "deviations" I shall not only understand deviations in the proper sense of the word, but also those partial thickenings of the nasal septum which bear different names, as, for instance, *spinæ*, *cristæ*,¹ etc. (spurs, outgrowths).

History.—Deviations of the nasal septum have already long attracted the attention of physicians. Already, in the eighteenth century, Quermalz had written a monograph concerning them. Since that time the number of works particularly treating of this subject has considerably increased. In the last "decennium" an enormous activity in this direction can especially be remarked. The following works have subsequently appeared: Jurasz (1882), Heymann, Hubert, Krieg, Gleitsmann, Cozzolino, Baumgarten, Löwy (1886), Bosworth, Bryson Delavan, Jarvis, George Stoker, Rosenthal, Stan, Garel (1887-1889); and during the last year Bronner, Woakes and Walsham, Simanowsky, Löwe, Hartmann, Moure and Bergonié, etc. The above-mentioned works present either complete monographs (Hubert's, Rosenthal's, G. Stoker's, etc.), or contributions to the etiology (Baumgarten's, B. Delavan's, etc.), or deal particularly with the treatment (Jurasz, Jarvis, Garel, Moure and Bergonié, etc.) of deviations of the nasal septum. Some authors—for instance, Jarvis, Bosworth, etc.—have written much concerning this question. I must remark, that American physicians in general have particularly occupied themselves

¹ German: *leisten*, *Verbiegungen*, *Verkrümmungen* der Nasen Scheidewand. French: *épérons*, *Deviations* (Malformations) de la cloison du Nez.

with this condition. Besides the above more important works, there exist also very many scattered papers devoted to deviations of the nasal septum ; such as the works of Schaeffer, Parker, Natier, Creswell Baber, Hinkel, Van der Poel, Roux, Bresgen, Holbrook Curtis, Ficano, Hunter Mackenzie, Seiler, Garrigou Desarènes, Boucher, Miot, Baratoux, Knight, Jonathan Wright, Roberts, Patrzek, etc., etc. The opinions of certain authors, expressed in discussions upon this subject, have also been regarded in this work. Lastly, deviations of the nasal septum are more or less minutely treated of in manuals of diseases of the nose : M. Mackenzie's, Moure's, Moldenhauer's, Voltolini's, Schech's, Flatau's, etc. ; as well as in an excellent anatomy of the nasal cavities by Zuckerkandl. In our (Polish) literature, so far as I know, there exists only one work, by Stan, who, in the year 1888, published in "*Przegląd Lekarski*" his observations of the clinics of Prof. Jurasz, of Heidelberg, as a contribution to the treatment of deviations of the nasal septum.

Pathological Anatomy.— Deviations of the nasal septum belong to the most common order of phenomena. Schech, one of the most prominent contemporary rhinologists, expresses himself as follows :—"It can be assumed that hardly a single individual has a perfectly straight nasal septum." Voltolini, from observations made so long ago as 1861, was also of opinion that in all cases he found a more or less express deviation of the nasal septum. G. Stoker also expresses his doubt as to the existence of a straight septum. From my own experience I can entirely agree with Schech's, Voltolini's, and G. Stoker's opinions. Already, long ago, I directed my attention to the examination of the nasal septum, examining it in every case, notwithstanding the presence or absence of nasal symptoms. I must here admit that I was only exceptionally able to affirm a complete symmetry of the nasal septum. This was mostly the case with very young patients, below seven years of age, which, again, would confirm the view of Zuckerkandl, who maintains that only from seven years upwards does asymmetry of the nasal septum begin. Latterly I made a minute analysis of two hundred cases. My results are as follows :—

In thirty-three out of two hundred cases, deviations of the nasal septum were so insignificant that to a certain degree we could speak of the symmetry of the nasal septum. In the remaining one hundred and sixty-seven cases, *i.e.*, 83·5 %, there were more or less distinct deviations of the nasal septum. I must, however, add that only in fifteen cases were these deflections so far developed that they alone could be the cause of those symptoms of which we shall fully speak further on. As to the frequency of these deviations, I should express myself as follows : however frequent are deviations of the nasal septum of moderate degree, they rarely appear in a very developed condition.

The statistics of different authors regarding the frequency of this disorder differ considerably, as the following shows :—

1. Zuckerkandl (1882) found deviationes septi in 37·8 % (of 370 cases—140).
2. Bryson Delavan (1888) found deviationes septi in 50·0 %.
3. Allen found deviationes septi in 68·9 % (58 cases).

4. Theile found deviationes septi in 73·5 % (of 117 cases—71).
5. M. Mackenzie (1884) found deviationes septi in 76·9 % (of 2152 cases—1657).
6. Jarvis (1888) found deviationes septi in 81·0 % (100 cases).
7. Loewenberg found deviationes septi in 86·0 %.
8. Simanowsky (1890) found deviationes septi in 95·0 % (of 974 cases—925).
9. P. Heymann (1886) found deviationes septi in 96·4 % (of 250 cases—241).

Thus my results (83·5 %, *i.e.*, of 200 cases—167) occupy the middle place between those of Jarvis, of New York, and Loewenberg, of Paris. The reason of Zuckerkandl's having obtained such small percentage in comparison with the others is, that in his experiments he used dry specimens in which the cartilaginous part of the nasal septum, forming the most frequent seat of deviations, is generally wanting ; whereas the last observations of Simanowsky, of St. Petersburg, made on patients, showed 95·0 % of asymmetrical septa. On the other hand, the observations of M. Mackenzie, based on enormous material (2152 cases, coming from the museum of the Royal College of Surgeons), showed a considerable difference from the conclusions of Zuckerkandl.

Extremely interesting are the comparative observations upon the frequency of deviations of the nasal septum in different races. Zuckerkandl showed that in general amongst Europeans asymmetry septi is much more frequently met with than among inhabitants of other parts of the world (37·8 %—23·3 %). M. Mackenzie found a still greater difference : out of 438 cases of symmetrical nasal septa only 22·6 % occurred in Europeans, the rest (77·4 %) were found in inhabitants of Africa, America, and Polynesia.

According to Bryson Delavan the Jews and Slavs have an idiosyncrasy to this condition. This supposition has, to a certain degree, some possibility ; at least, it might be supported by Simanowsky's (St. Petersburg) and my own (Warsaw) statistics.

I have nowhere found any statement as to the prevalence of deviations in either sex markedly. In my observations this prevalence was decidedly in the male sex (out of 167 cases of asymmetrical septa 95 were men, 72 women). Simanowsky arrived at the same result (out of 925 cases 337 were women, 588 men).

In my observations I mostly found deviations of the nasal septum occurring in young persons, between fifteen and twenty-five years of age (out of 167 cases—71). Below seven years I never saw distinct deflection septi, although some authors, as Voltolini, Löwe, maintain that they have observed them in children of six, five, and four years of age. Walsham mentions even children of a few months old, and Patrzek the new-born infant. This latter would prove the existence of congenital deviations of the nasal septum, which, although occurring rarely, is accepted also by Schaeffer, Woakes and Spicer. I have already mentioned how Zuckerkandl treats this question. As to my opinion, deviatio septi may exceptionally be congenital, but I must say that I myself have hardly seen any deviations below seven years of age.

Deviations of the nasal septum occupy only the anterior two-thirds of this structure, the posterior one-third being constantly in the central position; for this reason the diameters of the posterior openings of the nose (the so-called "choanæ") are equal. All authors (Zuckerkandl, M. Mackenzie, Moldenhauer, Voltolini, Flatau, etc.) agree in this statement. Gruber's contribution in this respect is unique. Schaus's case, however, is deservedly held in question by Voltolini, as not being confirmed by posterior rhinoscopy, but based only on the assumption of unequal "choanæ," as found by introduction of the aural catheter.

In performing posterior rhinoscopy in all cases possible, I never was able to observe any distinct deviation of the nasal septum to either side, but in two cases I distinctly remarked a very slight degree of deviation, namely, once in a female, aged twenty-eight, who presented deflection towards the right side (in the anterior part of the septum was a deviation of moderate degree), and in the second case in a man twenty-three years old—with precisely the same condition—with simultaneous well-developed swelling (hypertrophy) of the posterior ends of the inferior turbinated bodies.

As to the deviations of individual parts of the nasal septum, the cartilaginous portion, the so-called "cartilago quadrangularis," is much more frequently subject to these deflections than the osseous portion composed of the lamina perpendicularis ossis ethmoidei and vomer. In this statement all authors (Heymann, Gleitsmann, Jarvis, etc.) unanimously agree, and my observations led me to the same result.

Attempts, more or less satisfactory, have been made to classify deviations of the nasal septum. *Viz.* :—

I. Loewenberg divides them, according to their situation and direction, into superior, inferior, horizontal and vertical deviations. This classification is adopted by Cozzolino, of Naples.

II. Jarvis, of New York, divides deviations into osseous (rare), cartilaginous (most frequent), and osseo-cartilaginous. According to this author the deviations may be partial—limited to certain parts of the septum.

III. Based upon his examinations of 11 fresh and 2018 dry specimens, Rosenthal defines six forms of deviation of the nasal septum :—

1. Simple deflection without thickenings.
2. Deviations of septum with thickening, or spurs.
3. Sigmoid deviations in vertical or antero-posterior direction.
4. Sigmoid deviations of both kinds with spurs.
5. Cristæ, without deflection of the nasal septum.
6. Zig-zag deviations.

IV. Stoker classifies them as follows :—

1. Angular deviations; in one nasal cavity the septum is bent to a more or less distinct angle—in the other there exists a corresponding concavity.
2. Curved deviations; the septum is bent like an arch.
3. Sigmoid deviations; in both nasal cavities there is an angular deviation. The author describes two forms of this deflection.
 - (a.) With double angular deviation of the nasal septum.

(b.) Where the anterior angle is formed of the cartilaginous part, the posterior one being composed of the junction of the osseous and cartilaginous portions under a more or less obtuse angle, or what seldom happens, by the osseous angle.

The author further counts amongst deviations of the nasal septum—

4. The so-called dislocations, and
5. Spurs, outgrowths, adhesions, and exostoses.

V. Hartmann (of Berlin) gave the most recent classification at the last international congress in Berlin (1890).

1. Deviations with or without thickenings of the nasal septum.
2. The so-called "leisten," and
3. "Dornförmige Vorsprünge."

These are the most important classifications of deviations of the nasal septum. The others—for instance, Walsham's, etc.—I pass over in silence. Some classifications, as Loewenberg's, Jarvis's, Hartmann's, in my opinion are too incomplete, the others (Rosenthal's) perhaps too minute. G. Stoker's classification is, I think, one of the best. Some authors do not care about the classifications of these deviations; for instance, Schech, in the third edition of his excellent work (1890, p. 240) expresses himself as follows:—

"The forms of deviationes septi differ exceedingly, the septum declines "gradually towards the bottom of the nose, amphitheatre-like. The "superior, inferior, or both parts of the nasal septum are bent; the deviation "maybe sigmoid, or there is deflection above and spurs below. Sometimes "the superior part is wedged into the inferior (infractious deviation)." Schech further separates the partial thickenings (spurs or the so-called "Spinöse leisten") from the real deviations of the septum. Although I am not a great believer in classifications, I would suggest the following:—

I. *Deviationes septi narium sensu strictiori*, i.e., deviations in their proper sense to one or the other side. They may be (1) right-sided, (2) left-sided, (3) bilateral (sigmoid), and (4) irregular.

II. *Deviationes septi narium* in the form of partial thickenings of the nasal septum (spinæ, cristæ, synechiæ, exostoses). These may appear (1) with symmetrical and (2) asymmetrical (deflected) nasal septa.

These, further considered, may be classified as follows:—

I. *Deviationes septi narium dextræ et sinistræ*.—These deviations are the most frequent. Various opinions exist as to the frequency of right and left-sided deviations. Some authors (Voltolini, Cozzolino, Gleitsmann) met with these deviations oftener on the left side. Semeleder, for instance, out of 35 cases, found deviatio dextra in 15, sinistra in 20 cases. M. Mackenzie also observed 38.9 per cent. left-sided, and 28.2 per cent. right-sided deviations. Others, on the contrary, have found them chiefly on the right side—e.g., Jarvis, Loewenberg, Hunter Mackenzie, Zuckerkandl (who of 140 cases found deviatio dextra in 57, sinistra in 51), and Simanowsky (right-sided, in 925 cases, 191; and 188 left-sided deviations). In my observation the septum was oftenest bent towards the right side: out of 167 asymmetrical septa, there existed deviatio dextra in 62 cases; sinistra, only in 45.

Hunter Mackenzie explains the relatively more frequent appearance of right-sided deviations as being mostly produced by the striking of the left side of the nose with the right hand ; this opinion, however, does not stand serious criticism.

The above deviation is characterized by the septum being mostly more or less bent in the "pars cartilaginosa" towards the left or right side. This flexion may occur in a vertical or antero-posterior direction. It may further be arched (curved deviation of G. Stoker), or, what more rarely happens, it forms a more or less distinct angle (angular deviation of G. Stoker). The nasal cavity, to which the deflected part of the nasal septum is directed, is more or less narrowed, the other cavity being correspondingly widened.

The diagnosis of these deviations offers no difficulty to anybody who knows even little of the use of the nasal speculum. Of course the degree of the deviations is not equal. Sometimes it is so insignificant that at first sight it may seem that we have to do with a symmetrical nasal septum. These cases in my observations formed about 16·5 per cent. Sometimes it happens that the bent part of the septum greatly narrows the corresponding nasal cavity, and it may exceptionally entirely obstruct it, touching the external wall of the nose. These cases, however, occur very rarely. Out of 200 cases I observed the greater degree of deviation of the septum only in 15, *i.e.*, 7·5 per cent.

We meet most frequently with deviations of moderate degree. In my statistics these form 152 out of 200 such cases.

I must here mention a certain particular form of "deviatio septi," to which Zuckerkandl, in the year 1882, had already directed his attention. It may occur that the anterior inferior edge of the quadrangular cartilage is not situated on the same plane as the membranous septum, but more or less projects into one of the nasal cavities. It resembles somewhat a dislocation septi narium. If considerable, it causes the same troubles as the greater degree of a common deviation. It sometimes, however, produces only a more or less distinct disfiguration of the face, and then from an æsthetic point of view it becomes the subject of operation, of which I shall speak further on.

Two such cases I lately had occasion to observe. The first was the case of a Jewess, aged nineteen ; the other, an official, fifty-one years old. In both, the cartilaginous part of the septum was directed to the left side. In both, dislocation was of a moderate degree, so that it only produced slight stenosis of the corresponding (left) nasal cavity.

We pass now to the next kind of deviation, *viz.*, sigmoid and irregular. The former occur relatively seldom (Moldenhauer). M. Mackenzie observed them in 9·5 % (out of 1657 cases in 205). Zuckerkandl, however, much oftener, namely, in 22·8 % (out of 140 cases in 32). Semeleder noted 10·2 % of sigmoid deviations of the septum. Simanowsky reports an exceedingly small percentage, namely, 1·8 % (out of 925 cases only in 17). I myself, have seldom met with these deviations (out of 167 cases only in 8, *i.e.*, 4·8 %). The characteristic of sigmoid deviations is as follows : in both nasal cavities we find widened and narrowed places, corresponding to the convexity and concavity of the nasal septum. The

septum is mostly, sigmoid-like, bent in an antero-posterior, but sometimes vertical direction.

Besides the above-mentioned deviations of the nasal septum, there exists still a number of cases where we are not able, notwithstanding the most minute examination, to classify the deviations in one of the above forms. M. Mackenzie and Rosenthal give them, not quite deservedly, the name of "zig-zagged deviations." M. Mackenzie found them very rare, namely, only in 5 cases out of 1657 (0·23 %). For these deviations I consider the most appropriate term is "irregular." Moure mentions them also. That we meet with them not so rarely as M. Mackenzie supposes, is proved by Simanowsky's (out of 925 cases in 345, *i.e.*, 37·3 %) and my own statistics (out of 200 cases in 52, *i.e.*, 26 %). Irregular deviation is exhibited in different forms, mostly as a combination of different types, namely, general or partial thickenings (spurs, outgrowths) of different kinds, and indistinct deflection towards one or the other side.

We pass now to the second group of deviations of the nasal septum.

II. *Partial thickenings* in the shape of spurs (*spinæ*, *cristæ*).

These appear to be comparatively frequent. M. Mackenzie, out of 2152 cases, found them in 673, *i.e.*, 31·2 %; Zuckerkandl in 28·9 % (out of 370 cases in 107).

Of my 200 cases I found them in 47, *i.e.*, 23·5 %.

Here, as in simple deviations, Europeans show greater inclination to this condition. Out of 103 cases, Zuckerkandl found *cristæ septi* in 29 cases of Europeans, only two cases being inhabitants of other parts of the world. We meet with these deformities much oftener in cases of asymmetrical septa. M. Mackenzie, out of 673 cases, found them in only 85 of symmetrical, and in 588 cases of asymmetrical septa. Zuckerkandl came to the same result, although his figures did not show such considerable differences (out of 107 cases, in 47 the septum was symmetrical, in 60 asymmetrical).

In my 47 cases in only three did there exist a comparatively straight septum. According to the above, it would seem very probable that between deflections and spurs of the nasal septum there is some genetic connection. Woakes tries to explain it in the following manner: "When the cartilaginous septum was pushed to one side the pressure tended to dislocate it from its line of insertion into the median ridge of the superior maxilla. A slow inflammatory process was set up at this line, which resulted in the formation of a buttress of hypertrophied cartilage and bone. In such cases the spur may be regarded as a consecutive formation, and should not be interfered with if it give rise to no symptoms." To this plausible hypothesis we might make this objection—that mostly, but not always, we meet with these spurs in cases of asymmetrical septa, and further, that not in all cases of deviation of the nasal septum, even when strongly expressed, do we find such spurs.

Cristæ septi are, according to Mackenzie, oftener observed on the left side (out of 673 cases, in 375 left, and in 231 right side). Zuckerkandl, on the contrary, found them more often on the right side (out of 107 cases, in 59 right, and in 48 left side). My observations confirm this latter (out

of 47 cases, 26 right and 20 left side). In Mackenzie's cases the spurs were oftenest found on the convex side of an asymmetrical nasal septum (out of 588 cases, in 414 ; in 107 on the concave side). Woakes is of a different opinion. I also had met with them oftener on the concave side (out of 47 cases, in 27 ; in only 14 cases on the convex side) ; in five cases the deviation of the septum was irregular. It may rarely happen that *cristæ septi* are symmetrical on both sides (Votolini, G. Stoker, Bosworth). In one of my cases, *i.e.*, a man aged forty-two, besides a left-sided pretty great deflection of the septum, there existed *cristæ* on both sides parallel with the inferior turbinated body—along the whole septum (the so-called “*leisten*.”) Zuckerkandl mentions the possibility of double (superior and inferior) thickenings (*cristæ*). Two such cases I had occasion to observe. One was the case of a pupil fifteen years of age, with a very considerable deflection of the nasal septum towards the right side. In the left nasal cavity I found a very prominent inferior *crista* (“*leisten*”) opposite the inferior turbinated body, in the other cavity a little less expressed “*leisten*” running along the whole septum—above the first—more or less level with the middle turbinated bone. Between both *cristæ* there was a deep irregular furrow. The second case was entirely analogous (a man, aged thirty-four)—*deviatio dextra* of a greater degree—two *cristæ* on both sides of the nasal septum—situated in the same position as in the above case. We meet with *cristæ* as well as with deviations of the septum much more frequently in men than women (Mackenzie). Out of 47 cases, I found them only in 13 men, the remaining 34 cases were women. We meet with the following two principal forms of partial thickenings :—

1. *Spinæ* (out of my 47 cases they occurred in 24).

2. *Cristæ* (out of my 47 cases they occurred in 23).

The former are real spurs (outgrowths) either rounded or pointed (acuminated). They are spoken of under different terms, spurs, crests, etc. Their most frequent situation is the anterior part of the septum (cartilaginous) at the entrance, a little above the bottom of the nasal cavities, and opposite the inferior turbinated bodies. We rarely meet with them on the osseous part of the septum, and rarely in the middle part opposite the middle nasal concha. The size of these spurs varies from a hardly perceptible prominence to such size as to touch the corresponding turbinated bodies or the external wall of the nose. In this latter case the permeability of the nasal cavity may be disturbed. Often, as I have mentioned above, there may exist at the same time deflection of the nasal septum under one of the above described forms. Such spurs comparatively often (in about half of my cases) run along the whole septum (they sometimes are visible also by means of posterior rhinoscopy), forming the condition called by Schech “*Spinöse leisten*.” In general they are spoken of by the Latin term—“*cristæ*.” They are pyramidal projections with the base more or less broad and pointed towards their summit. They are mostly, like *spinæ*, situated on the inferior part of the septum, parallel to the inferior turbinated bodies. We rarely meet with them in the middle part, more or less parallel to the middle concha. Sometimes the corresponding turbinated bones bear the trace of depression of these

projections (spinæ and cristæ) in the form of furrows, showing the atrophic process of these parts.

Hartmann states the following to be the most frequent places where spurs of both kinds appear :—

1. The junction of the vomer and cartilago-quadrangularis.
2. The junction of the vomer and lamina perpendicularis ossis ethmoidei.
3. The junction of the cartilago-quadrangularis and lamina perpendicularis ossis ethmoidei.

Sandman supposes that crests running in the horizontal direction upon the septum, above the base of the nose, are formed by the cartilages of normally existent Jacobson's organ. With this hypothesis, however, Herzfeld does not agree. We have already mentioned how Woakes explains this condition. *Exostoses* are, according to Löwe, hypertrophies of the normally existing (1) prominence of Schwalbe, and (2) the so-called Jacobson's organ. They generally do not produce any trouble. G. Stoker divides them into cancellous and ivory. These latter occur very rarely.

They sometimes form adhesions (synechiæ) with the corresponding turbinated bodies (Zuckerkindl—middle, Voltolini—inferior). Such adhesions often appear after galvano-caustic operations in the nose. In one of my cases, that of a man thirty-two years old, from whom I removed by the galvano-caustic loop the middle polyplike degenerated turbinated body, I accidentally found some time after an adhesion between the remaining part of this body and the septum, without, however, giving rise to any subjective symptoms.

Etiology.—The causes of deviations of the nasal septum are generally obscure. How different authors have regarded these deviations as congenital (Patrzek, Duplay, Schaeffer, Woakes, Spicer, G. Stoker, etc.), or acquired (after seven years), as Zuckerkindl affirms, I have already fully mentioned; some authors, as Jarvis, Gleitsmann, Hinkel, etc., suppose them to be hereditary.

Amongst the most frequent causes producing deviations of the nasal septum we must especially recognise—

1. *Traumatism.*—Many authors (Ziem, Bresgen, Bosworth, Schaeffer, Woakes, Walsham, Voltolini, G. Stoker, Moure, etc.) look upon this as the most prominent agent. During intra-uterine life or during the act of parturition (irregular position, or awkward extraction of the fœtus by instruments) the traumatic agency may, to a certain degree, play a part in the etiology of deviations of the septum (G. Stoker, Patrzek). But no doubt childhood gives the greatest occasion for its production. It occurs especially during the first attempts at walking, which occasion many falls, in which generally the nose, *i.e.*, the anterior part of the nasal septum, mostly suffers (Moure). In childhood also knocks on the face and against the nose, especially its septum, occur frequently. Out of my 200 cases, 9 gave a clear history of traumatism in childhood as a cause of deviation. That the deviation of the septum can be provoked by sleeping upon one side, as Welcker affirms, or by the habit of wiping the nose with only one hand, poking one nostril with the finger, as Cloquet affirms, is more than doubtful. Moldenhauer is also of this opinion. Whether

persistent pressure upon the septum, resulting from the existence of growths in one nasal cavity, can produce deflection of the septum is difficult to say. Indeed, in all my cases, where in one cavity there had been an enormous number of polypi of long duration, there was at the same time a more or less distinct deflection of the septum towards the opposite side. It is, however, doubtful if in these cases *deviatio septi* was the cause, or perhaps the result of these growths.

Baumgarten's theory of pressure is based upon this fact. In older children the hypertrophied inferior turbinated body (more frequently on the right side), touching the nasal septum, produces a gradual pressure, occasioning deflection of the septum towards the opposite side (oftenest the left). This deflection is mostly expressed where the turbinated body is most hypertrophied, as for instance at the anterior part (*pars cartilaginosa septi*). Sigmoid deviation Baumgarten explains by coincident pressure of the inferior and middle turbinated bodies. The fact that the posterior part of the septum remains unchanged is explained by the author as due to the posterior parts of the turbinated bones having room enough to enlarge. In support of his hypothesis Baumgarten cites the fact that in cases of atrophic forms of nasal catarrh the septum is comparatively often symmetrical, which I am able fully to confirm from my experience. Woakes also emphasizes the fact that in cases of equal hypertrophies of the turbinated bodies he has never seen any deviations; in cases, however, of bilateral unequal hypertrophies the deviation was towards the side with a less hypertrophied turbinated bone. Baumgarten's theory does not stand criticism upon close examination, for this reason, that there exist whole series of cases where, besides pretty considerable deviations of the nasal septum, hypertrophies of the turbinated bodies are not observed, and *vice versa*. There are cases with enormously hypertrophied turbinated bones, touching the septum of one or both sides, with a quite symmetrical nasal septum. Out of my 200 cases, in 80 only did there exist a more or less marked hypertrophy of the turbinateds, either inferior or middle, of one or both sides. In the remaining 120 cases the turbinated bodies were of normal size, or even presented varying degrees of the atrophic process. Löwy and Zuckerkandl do not agree with Baumgarten's theory.

In the second group of causes of deviations of the nasal septum we must remark unequal development of the parts composing the septum. Amongst supporters of this theory are Schaus, Hopman, Roser, Walsham, Stewart, and Schech, who expresses himself as follows: "When the cartilage (*cartilago-quadrangularis*) grows in greater and stronger comparison to the bones (*vomer* and *lamina perpendicularis ossis ethmoidei*), it must bend sideways, the other direction (up and down-wards) being impossible. If it grows still more, *spinæ* and *Spinose* 'leisten' appear." Voltolini reproaches this theory as being obscure. What indeed is the cause of this unequal development? Some authors (Löwy) state *rachitis*; others (Bronner) make post-nasal growths responsible for it. This latter opinion, however, does not stand any criticism. Out of my 200 cases hardly in 12 were there post-nasal growths along with deviations of the septum presumably as a complication of these deviations

Woakes also does not attach any distinct importance to these growths in the development of deviations of the nasal septum. Löwy's hypothesis, however, viz., rachitis, as a cause of the unequal development of the parts of the septum, is more probable.

Of course, as to the etiology of deviations of the septum we must, I think, in certain cases accept traumatic origin, but in most cases the unequal development of the component parts of the nasal septum must be regarded as the only cause of these deviations.

I must here add that certain pathological processes, such as syphilis and lupus, producing cicatric (retractile) degeneration, may be a cause of deviations of the nasal septum (G. Stoker). Casselberry makes deviation in chronic nasal catarrh dependent on the increased atmospheric pressure.

(To be concluded.)

ANALYSIS OF NINE CASES OF TUBERCULOSIS OF THE LARYNX, TREATED WITH KOCH'S LYMPH.

BY

Dr. JOHN SEDZIAK (Warsaw) and Dr. ALFRED SOKOLOWSKI (Warsaw).

THE following five cases were observed by me at the Child-Jesus Hospital, in the clinic of Prof. Tumas, under the care of Dr. Pruszyński, assistant of the clinic, who occupied himself with special minuteness with the chemical and microscopic investigations of the sputum, urine, excrements, etc.

Case I.: C., thirty-six years of age, a gardener, came to the clinic on November 26, 1890. The disease commenced ten months ago. Amendment of the condition of the larynx by means of local treatment. Without diathesis. No hæmoptysis. No syphilis.

Status præsens: General condition moderate. Weight 51·7 kilos. No fever. Indurations of both pulmonary apices (especially the right). Tubercle bacilli were found in the sputum.

Larynx: Hoarseness, dysphagia. The left half but little movable. The left ary-epiglottic fold and arytenoid cartilage greatly thickened and swollen. In the rimula (inter-arytenoid region) small ulceration with greyish base. The left ventricular band infiltrated. On its posterior part an ulcer spreading on to the true vocal cord. At the anterior angle of the left vocal cord a thickening the size of a hemp seed.

The first injection of Koch's lymph was made upon November 27, 0·0015 being employed. During sixteen days five injections were performed; the greatest dose given was 0·005. In all, 0·0145 of the fluid was used. The general reaction was always very slightly manifested. Locally, there occurred in the larynx after the first injection a little increased swelling of the mucous membrane of the left arytenoid cartilage

and ary-epiglottic fold. Slight swelling of the mucous membrane of the right arytenoid cartilage appeared. Dysphagia was greater.

After the second injection the above symptoms diminished. The movability of the left vocal cord became greater. On the left cord a slight layer of secretion was observed, and the ulcer seemed to be more superficial. After the third and fourth injections there was no local reaction. Pain was felt in the left ear. After the last (fifth) injection perforation of the tympanic membrane ensued. The patient did not agree to undergo further injections.

Result : General condition better (increase in weight 2·3 kilos).

In the lungs : The symptoms of infiltration somewhat less. The quantity of bacilli also diminished.

In the larynx : Slight hoarseness ; no dysphagia. The swelling of the left ary-epiglottic ligament and arytenoid cartilage, and the infiltration of the left ventricular band, considerably diminished. The ulcer on the left ventricular band seems to be more superficial, and its base cleaner.

Case II. (a very interesting one) : R., aged thirty-seven, a porter, came to the clinic on November 26, 1890. The beginning of the disease dated from four years ago. He has been under my care for some months. During this time the state of the larynx had improved by means of local treatment. He was without diathesis. One year ago he had hæmoptysis. No syphilis.

Status præsens : General health moderate. Weight 48·0 kilos. Without fever.

In the lungs : Extensive indurations of both summits—especially the right, with the symptoms of commencing destruction. Tubercle bacilli in the sputum.

Larynx : Hoarseness, dysphagia. The posterior wall (lig. ary-epigl. cart. aryt. et regio inter-aryt.) greatly thickened and swollen—especially the right arytenoid cartilage. In the rimula (inter-aryt. region), the mucous membrane was uneven and reddish-grey. The true vocal cords were thickened, and on the left, at its posterior third, was a growth the size of a peppercorn. The right ear gave great pain—otorrhœa. Tubercle bacilli in the purulent secretion of the ear were found. In the meatus auditorius ext. the granulations were soft, red, and bleeding on touching.

The first injection with Koch's lymph was made on November 27, 0·0015 being employed. During eleven days four injections were performed. The largest dose was 0·003. In all, 0·008 of the fluid was used. The general reaction was very slightly expressed except after the last injection (dose diminished to 0·0015). After every injection the subjective symptoms (hoarseness, dysphagia, pain in the ear), as well as the objective symptoms in the larynx (redness and swelling of the affected parts), gradually increased. After the last injection this swelling grew to such a degree that dangerous dyspnœa appeared, caused by the enormous swelling of the posterior part of the larynx (especially of the right arytenoid cartilage). Three endo-laryngeal incisions were performed, and somewhat diminished the dyspnœa so as to avoid tracheotomy. On account of such a deterioration, not only in the state of the larynx, but

also of the lungs, the dimensions of matitis of the right summit becoming greater, as well as of the general health—weight fell to 1·5 kilogramme—the further injections were stopped. The patient left the hospital. One and a half months after I saw him again; general condition miserable, dyspnœa, great hoarseness, and complete dysphagia, with enormous swelling of the right arytenoid cartilage (perichondritis). The rest of the larynx, except the epiglottis, was also in a very bad state.

Case III.: P., fifty-four years old, a tailor, came to the clinic on October 28. The disease began eight years ago. Hæmoptysis. Without diathesis. No syphilis.

Status præsens: General condition bad. Weight 61·6. Induration of the apices of the lungs (especially the right). Bacilli tuberculosis were found in the sputum.

Larynx: Slight anæmia of the whole mucous membrane. In the neighbourhood of the right processus vocalis was a slight excavation, surrounded by a white margin. On the left vocal cord, a little thickened in front of the processus vocalis, was a growth the size of a hemp seed, corresponding with the opposite excavation.

The first injection with Koch's lymph was made on November 28, in doses of 0·001. Six injections were performed, the largest dose being 0·008. In all, 0·024 of the fluid was used. Very slight general reaction occurred, and no local reaction.

Result: General condition better (increase of weight 3·5 kilogrammes).

In the larynx: No changes.

Case IV.: Ch., aged thirty-one, locksmith, came to the clinic on December 2. The beginning of the disease dated from one and a half years ago. Several times he had had hæmoptysis, without diathesis. No syphilis.

Status præsens: General state satisfactory; weight 56·0.

In the lungs: Induration of the apices, tubercle bacilli in the sputum.

Larynx: Hoarseness; the posterior part thickened on the rimula (inter-arytenoid region). The mucous membrane was thickened, uneven, greyish, and with excrescences. The arytenoid cartilages (especially the left), as well as the left ary-epiglottic fold, were swollen, red. The left ventricular band was thickened on its anterior two-thirds, covering the true cord, in the posterior part an ulcer spreading to the true vocal cord and rimula. The right vocal cord thickened and uneven.

The first injection with Koch's lymph was made on December 3, in doses of 0·0015. During two weeks three injections were performed. The greatest dose was 0·002. In all, 0·0055 of the fluid was used. The general reaction was very great (1 39·0°C).

In the larynx: After the first injection, no changes occurred. After two further injections, increase of swelling and redness of the mucous membrane (especially of the left arytenoid cartilage) followed. Pain in the left region of the larynx appeared. General condition worse (weight less 1·8). In such a state the patient left the hospital for the holy days. Nine days after he came again to the clinic, complaining of dyspnœa and dysphagia. The examination of the larynx showed paresis of the left half, and arytenoid perichondritis, with a large ulcer on the left false

and true cords. In the rimula no changes. Rima glottidis less in dimensions. On account of this state no further injections were made.

Case V.: S., forty-five years of age, came to the clinic November 25, 1890. The disease began three years ago. Questionable diathesis; no syphilis; no hæmoptysis.

Status præsens: General condition bad; weight 50.0; without fever. Induration of the left summit. Emphysema pulmonum. Tubercle bacilli in the sputum.

Larynx: In the rimula the mucous membrane thickened—greyish, wrinkled.

The first injection of Koch's lymph was made November 27, in doses of 0.0015. During five days three injections were performed. The largest dose was 0.005. In all, 0.0085 of the fluid was used. General reaction very decided (1 39.6°C).

In the larynx: No changes. Injections were stopped on account of increased dyspnoea and general weakness. Some days after, hæmoptysis appeared. The number of rhonchi in the left apex much greater. No change in weight.

The above cases were also observed by Dr. Wróblewski, specialist for diseases of the throat in Warsaw.

The following three cases were observed by Dr. Sokolowski in his department at the Holy Ghost Hospital, whom I now leave to speak:—

Case VI.: P., thirty-two years of age, a peasant. Without diathesis. Cough lasting for six years. First pneumorrhagia, two months ago; hoarseness for ten months; no dysphagia.

Status præsens: General condition moderate; weight 62.4 kilogrammes, without fever. In the lungs, induration of both summits without destructive symptoms. In the sputum, tubercle bacilli in small quantity.

Larynx: A little infiltration of the posterior part of the larynx; smooth ulceration, one millimètre in size, on the free edge of the right vocal cord. On November 23 the treatment with Koch's lymph was commenced, the first dose being 0.001. During three weeks eight injections were made; the greatest dose was 0.007. In all, 34½ milligrammes of lymph were used. The greatest reaction reached 39.4°C. Trembling, aching in the joints, and sweating were present. No local reaction in the larynx was observed.

Result of the treatment: Deterioration of the general state; loss of weight, 1.3 kilogramme. Ulceration on the right vocal cord much increased. Infiltration of the posterior part of the larynx without changes. In the lungs the number of rhonchi increased.

Case VII.: R., aged thirty-six, a merchant. Without diathesis. Cough lasting three years; hoarseness for one year; dysphagia for some months. Three months ago the first pneumorrhagia.

Status præsens: The general condition bad. At both summits of the lungs extensive indurations, with the symptoms of commencing destruction. In the sputum numerous bacilli were found. The patient had fever with evening exacerbations, to 39.0°C. In the larynx, extensive infiltration of the posterior part and both cords (with ulcerations),

especially the right. The treatment was commenced on November 23, and Koch's lymph was injected in quantity of 0·001. During seventeen days eight injections were made. In all, 16 milligrammes of the fluid were used. The patient constantly showed reaction, and the temperature reached 40·0° C. In the larynx locally, reaction expressed itself under the form of momentary clearing of the ulcers from the muco-purulent secretion.

Result : Considerable deterioration of patient's general condition. Loss of three kilogrammes of weight, with loss of strength. The fever, till now appearing only in the evenings, changed its character to a constant one, with evening exacerbations to 40·0° C. In the larynx : the ulcerations, clearing at first, gradually began to adopt their primary character ; at the same time infiltration of the posterior part of the larynx became more extensive, and dysphagia gradually increased. In the lungs the quantity of rhonchi became also greater.

Case VIII. (the most interesting case) ; P., forty-three years old, a teacher, with hereditary predisposition ; cough lasting one year, hoarseness for ten months.

Status præsens : Nutrition moderate ; weight 48·5 kilos. *Status afebrilis* : Great cough and expectoration. In the sputum single bacilli were with difficulty discovered. In the lungs : induration of both summits without destructive symptoms. In the larynx : great infiltration of the epiglottis and posterior part of the larynx, as well as of partially ulcerated ventricular bands. The vocal cords not visible. Moderate pain in swallowing. On the lower lip near the left angle was an ulcer one-half centimètre in diameter, with rounded edges, and covered with a greyish purulent layer. In the secretion of the ulcer, tubercle bacilli were not discovered. On November 27 the treatment with Koch's lymph was commenced, and the first injection was made in dose of 0·001. During two weeks seven injections were performed. In all, 29 milligrammes of the fluid were used. In the commencement the patient reacted slightly (38·2° C.) After an increased dose, 0·005, the temperature rose to 39·0° C. The general reaction appeared very distinctly (increased cough, trembling, sweating ; pain in the extremities). In the lungs : during the whole period, no more important changes were discovered beyond quickly passing rhonchi, and a considerably increased quantity of expectoration. After the first three injections, dysphagia greatly increased. On the epiglottis, as well as on the ventricular bands, extensive ulcerations appeared. The ulcer on the lower lip at first entirely cleared, and visibly showed an inclination to heal, although in dimensions no change was remarked. After the fifth injection, in quantity of 0·005, this ulceration (on the lip) for the second time was covered with a greyish layer, around which numerous miliary tubercles began to appear, which were quickly destroyed. During some days the ulcer spread considerably, almost to double its former size, and was constantly surrounded with small tubercles. The patient began to have constant fever, to 39·0° C. General condition very soon gradually became worse. On account of this deterioration the injections were interrupted. The fever, however, did not cease, but rose constantly up to February 1, 1891—to 39·0° C.

As to the local process in the larynx, as well as on the lower lip—these, owing to the surgical treatment and lactic acid, improved considerably.

The above cases I had also occasion to carefully observe during the whole time.

Case IX. (the last) was under the care of Dr. Karwowski in his department of the Child-Jesus Hospital, who has had the courtesy to permit me to publish it. R., a priest, came to the hospital on November 11. For some years he has had cough, sometimes hæmoptysis, hoarseness and pain in swallowing. General condition satisfactory. No fever.

Status præsens: Condensatio in apice sinistro (in dorso) et in apice dextro (sub-clavicula).

In the larynx: The ventricular bands thickened, uneven, entirely covering the vocal cords, of which the edges only were visible. Small ulcerations on the ventricular bands, as well as on the vocal cords. Epiglottis normal.

The injections were commenced on November 25, with a dose of 0·001, without reaction. The second dose (0·002) produced no reaction. Only after 0·003 did reaction appear, six hours after injection. Temperature 38·7° C. Cough on first day; later with abundant expectoration, but without any subjective symptoms on the part of the larynx. Next day temperature 37·0° C. In the larynx, infiltrations and ulcerations greater. The day following, redness ceased and infiltrations diminished, so much, that the vocal cords became visible. The larynx became pale and the cords were covered with a greyish layer, similar to detritus. From that time twelve injections have been made up till now. After every injection evening temperature rose to 38·5° C., being normal again in the morning. In the larynx new ulcerations were constantly forming, especially in the inter-arytenoid region, as well as on the interior (laryngeal) surface of the epiglottis. Between the seventh and eighth injections the miliary ulcerations on the epiglottis healed, leaving no trace. Dysphagia, which ceased after the first injection, reappeared together with the ulceration on the inter-arytenoid space. Cough became greater in the evening. The quantity, as well as quality, of the tubercle bacilli in the sputum did not show any visible changes.

Present state: General condition unchanged—the local state of the lungs likewise. The larynx looks as if it had been curetted by means of a sharp spoon. A quantity of ulcers, of different sizes, is visible on the vocal cords, as well as on the ventricular bands. Their bases are quite clean and show granulations. The ulcer on the inter-arytenoid region is greatly diminished by filling up from the edges and base. No dysphagia. A great piece of the right vocal cord (its posterior portion) was eliminated during the treatment by Koch's lymph, but this want of substance is now filled up. Loss of weight, one pound.

This case I had also occasion to observe.

These are the strictly observed histories of nine* cases of tuberculosis of the larynx, treated with Koch's lymph in Warsaw.

As to the conclusions, it is not at present my intention to speak.

* They form only part of the laryngeal cases treated in Warsaw by this method.

THERAPEUTICS AND DIPHTHERIA.

Hillis, John D. (Dublin).—*Forceps for the Removal of Enlarged Follicles from the Pharynx.* "Brit. Med. Journ.," May 24, 1890.

THIS instrument is the invention of Dr. P. C. Smyly. By it, after cocainization, the follicle is seized vertically, and twisted off. An illustration accompanies the letterpress. *Hunter Mackenzie.*

Löri (Buda-Pesth).—*Contribution to the Therapy of the Diseases of the Nose and Pharynx.* "Allgemeine Wiener Med. Zeit.," 1890.

In acute catarrh of the nose the author uses tincture of belladonna; in angina, gargles of iodine and iodide of potassium; in tonsillitis, mycotic brushing with chloroform or iodum dissolved in chloroform; in laryngeal spasm, external application of belladonna plaster; in diphtheria, sulphur; in papillomata, zinc solution. *Michael.*

Sheppard, C. E. (London).—*Difficulties connected with the Use of Nitrous Oxide Bottles in the Horizontal Position.* "Lancet," Feb. 21, 1891.

THE occasional fitfulness of the discharge of nitrous oxide gas is attributed to the blocking of the valve by liquid nitrous oxide. He proposes to prevent this by the introduction into the horizontal bottle of a tube with its inner extremity turned up so as to be above the level of the liquid. This is said also to prevent the "setting" of the screw sometimes produced by the freezing of the suddenly escaping gas. (To those, who, like the reporter, make use of nitrous oxide anæsthesia with considerable frequency for the rapidly performed operations in the nose and throat, every detail tending to the success of the administration is of interest and value in view of the mortification attached to an imperfect as contrasted with the satisfaction attendant on a perfect anæsthesia.) *Dundas Grant.*

Coupard and Saint-Hilaire.—*Antipyrin in Affections of the Nose and Throat.* "Rev. de Laryngol.," Jan. 15, 1891.

THE authors employ antipyrin to combat the pain in reflex affections of the larynx in neurasthenics suffering from catarrhal laryngitis. It diminishes the sensibility of the larynx if employed by brushing or in powders. Twenty-nine observations of patients suffering from nervous movements and inflammations have been cured by this treatment, and sufferings in phthisis are also diminished. *Joal.*

Coculet.—*Tincture of Thuja in Tracheotomy.* "Journ. Med. de Paris," Dec. 7, 1890.

THE author recommends the employment of this tincture to destroy the fleshy vegetations which cause the irritation in the region of the canula. He quotes two cases in support of his contention. *Joal.*

Rabow.—*Co'd in the Head.* "Brit. Med. Journ.," April 19, 1890.

THE author asserts that "frequent and strong snuffing" of a powder

composed of two parts of menthol, fifty parts of finely-ground roasted coffee, and fifty parts of powdered sugar, is a sovereign remedy against fresh colds in the head.
Hunter Mackenzie.

Féré.—*Treatment of Stammering.* Soc. de Biologie, Dec. 6, 1890.

THE author makes a communication upon this subject, showing that simple exercise of the muscular force may beneficially influence the movements of articulation in the tongue, and that we ought to practise this in troubles due to the weakness of that organ.
Joal.

Saint-Hilaire.—*Injections of Dog's Blood Serum into the Trachea.* Soc. de Biologie, Jan. 31, 1891.

WITH Dr. Coupard the author has injected dog's blood serum into animals and man. Rabbits have stood injections of 4 centigrammes of serum in two minutes without presenting any respiratory difficulty. In dogs the experiments were also successful. In man the injections have been quite harmless. At six different times 4 centigrammes were placed in the trachea of a man twenty-two years old, without accident.
Joal.

Richet.—*Injections of Blood Serum (Dog) in the Treatment of Phthisis Laryngea.* Soc. de Biologie, Jan. 24, 1891.

THE author's observations are upon patients who had subcutaneous injections of blood serum from the dog. These observations have been collected by Drs. Hericourt, Langlois, and Saint-Hilaire. They show that various patients, suffering from laryngeal and pulmonary phthisis, have been improved by these injections both in a local and constitutional way. They have increased in weight since the beginning of the treatment.
Joal.

Editor, "British Medical Journal" (London). *Diphtheria in Domestic Animals.* "Brit. Med. Journ.," May 31, 1890.

A LEADING article, having reference to the researches of Dr. Klein, which tend to show that not only cats, but also cows, are liable to suffer from diphtheria. He inoculated two perfectly healthy cows with a broth culture of the pathogenic bacillus from human diphtheria. The animals became very ill; one died on the fifteenth day, the other was killed (being very ill) on the twenty-fifth day. During the illness both animals had an eruption on the skin and teats of the udders. From one of the cows on the fifth day milk was drawn from a healthy teat, and from this cultivations were made. Thirty-two colonies of the diphtheria bacillus, without any contamination, were obtained from a single cubic centimetre. The milk of the cows, when given to healthy cats, produced diphtheria.
Hunter Mackenzie.

Brusque.—*On the Transmission of Diphtheria from Animals to Man.* "Bull. Therap.," Dec. 30, 1890.

THE author reports three cases of infants seized with diphtheria after being present at the autopsies of a horse, ass, and hog, which had died of quinsy.
Joal.

Babes (Bukarest).—*Researches on Diphtheria-Bacilli.* "Virchow's Archiv.," Bd. 119, Heft 3.

By the application of Loeffler's bacillus, also by filtrations and extracts of the cultures, diphtheria could be produced in animals, but the toxalbumins produce in the cells different processes from the living bacillus. It is possible that the symptoms of the disease are also produced by a second microbe and not alone by Loeffler's bacillus. If the mucous membrane of the animals was treated with corrosive sublimate 1'4000, alcohol 1'5, boric acid 1'20, potass. permanganate 1'1000, chloral hydrate 1'200, it was not possible to infect it with the poison. The author does not believe in the efficacy of preventive vaccination. *Michael.*

Thorne Thorne (London).—*On Diphtheria; its Nature, History and Prevention.* "Lancet," February 21, 1891.

IN the first of his Milroy Lectures, Dr. Thorne pointed out "the failure "from the anatomical point of view to differentiate between the several "membranous affections of the throat," the inability of clinical medicine to supply "the means of distinguishing between the infective or the "benign character of throat diseases," though great advances had been made as to the etiology. It was next shown, that whereas formerly the disease was proportionally more frequent in sparse communities, it was now comparatively more frequent in the denser districts. The areas where diphtheria had caused the highest mortality were shown to lie along our exposed north-eastern and eastern coasts, and in the mountainous districts of Wales, and this especially in the damp valleys so abundant in some Welsh counties. Soil-wetness from stagnation of water was conducive to ill-health and diphtheria, but when arising from the proximity of moving water was probably in no such way injurious. The influence of season was shown by the increase in the fourth quarter of the year, attacks commencing to be frequent from September, and mortality great from October to January. Females were more affected than males during the first fifteen years of life, chiefly from their being brought into closer contact with the infected sick, but also, according to Dr. Downes, from some greater physiological proclivity. As regards age, the greatest proportion of total diphtheria deaths was in the period between three and fifteen, still more between three and twelve, and further between two and five. In infancy death from diphtheria was comparatively scarce, owing to absence of exposure to infection, and to feeding on breast-milk or sterilized substitutes, as possibly also to the rudimentary character of the tonsils. The influence of the school period is very notable.

Phillips, Sidney (London).—*On the Symptoms connected with the Circulation in Diphtheria.* "Brit. Med. Journ.," April 26, 1890. Harveian Soc. of London, April 17, 1890.

THIS paper was based on one hundred cases of diphtheria, which had been under the author's observation. Intra-cardiac thrombosis was an occasional cause of death, especially where it occurred on the right side of the heart. It might cause death suddenly. In three per cent. of the cases there was extreme slowness of the pulse: they were accompanied

by vomiting and ended fatally. In another class the pulse was very rapid; where the number of pulse beats exceeded two hundred per minute for two or more days, death ensued, usually from syncope. Irregularity of the pulse was not uncommon—it was not of unfavourable prognosis. Syncope occurred in twenty-six of the one hundred cases, in many instances being preceded by extreme rapidity or slowing of the pulse, by the approximation of the first and second sounds of the heart, or without any kind of warning. It might occur late in the case, when the patient appeared to be progressing favourably. Cardiac tonics were of little avail, but stimulants and feeding were highly necessary. Dilatation of both sides of the heart was common from softening of the muscular fibre. On the right side, collapse or congestion of the lung was especially prone to produce this condition, and if the heart had become dilated before tracheotomy had been performed, it often failed to regain its power after the operation. Early tracheotomy was therefore desirable when collapse of the lung appeared to be imminent. Hæmorrhages from the mucous surfaces occasionally occurred. Three of the one hundred cases were characterized by fatal epistaxis: in four there was bleeding from the thyroid body after tracheotomy, and in one case hæmoptysis was associated with purpura. Endocarditis was probably never a result of diphtheria, though murmurs might be produced by dilatation or anæmia.

Discussion.—Dr. Mackenzie believed the slow pulse of diphtheria to be due to irritation of the vagus, and the quick pulse to paralysis of this nerve. He referred to two cases recently under his observation, in which cancerous stricture of the gullet had caused the pulse to fall below thirty per minute. Dilatation of the ventricles was, he thought, owing to the action of some toxic agent. Dr. Hill had recently met with a case of Cheyne-Stokes respiration in a child, in which relief of the symptoms had been obtained by thoroughly clearing out the nasal passages with a solution of menthol. Dr. Drew thought that fatal cases of syncope usually occurred after a mild attack, and were possibly due to the fact that less care was taken of the patient, and that the dieting and administration of iron were not persevered in to the same extent as in the more serious ones.

Hunter Mackenzie.

Sevestre.—*The Treatment of Diphtheria by Ice.* Soc. Med. des Hôpitaux, Nov. 28, 1890.

SPEAKING of a work by Dr. Bleyne, the author says that the administration of ice is easy and presents no danger. It is efficacious in diphtheritic angina, and forms a useful adjuvant in treatment, but it would be imprudent to depend exclusively on this agent, and one must practise antiseptics of the throat. All the same, if the administration of ice to the throat prevents invasion of the larynx, it is doubtful whether it can exercise any efficacious results when once the disease is established in the throat.

Joal.

Nepveu.—*Treatment of Diphtheritic Angina by Injections of the Sublimates of Mercury.* "Bull. Med.," Dec. 28, 1890.

THE author has practised injections in the tissues of the tonsil, and

in the largest and most accessible glands of the neck. Three to nine drops of a solution of distilled water, 90 grammes; finely powdered sublimate, 10 centigrammes (10 centigrammes morph. hydrochlor. may be added) is used. The author recommends complete antisepsis of the mouth and throat, and also application of tincture of iodine to the neck, larynx, and windpipe. Sulphate of quinine, naphthol, salicylate of bismuth, and slight purgation are recommended for general treatment.

Joal.

Schwitzer (Neuhäusel).—*Tinctura Nicotianæ Emphyreumatica against Diphtheria.*

"Centralbl. für die gesammte Therapie," 1890, No. 12.

THE author, who has observed that smokers and tobacco chewers are hardly ever attacked by diphtheria, has applied a tincture of tobacco in cases of diphtheria and has been pleased with his results. *Michael.*

Hagedorn.—*Galvano-Cautic Treatment of Diphtheria.* Aerztlicher Verein in

Hamburg. Meeting, January 13, 1891.

APPLICATION of galvano-cautery in twenty-five cases of diphtheria has had good results in twenty-five cases.

In the discussion WARTZ recommended ice treatment.

LEUDES DORF does not believe that we have a specific against the disease.

ALG recommended combination of potassium chlorate with hydrochloric acid.

Michael.

Luys.—*Rapid Cure by Transference of Old Standing Diphtheritic Paraplegia in a Non-Hysterical Woman.* "Gazette des Hôpitaux," Nov. 13, 1890.

THE patient was thirty years of age, had never shown any signs of hysteria, and of good family history. She was attacked by diphtheria in July, 1888, which resulted in diphtheritic paralysis of the throat and paraplegia. Electric baths, massage, and cold douches, as well as the administration of various remedies, produced no appreciable result. She gradually became hysterical, and in February, 1890, was transferred by her own doctor to Professor Luys, and was submitted by him to five transference *séances*, with the result that the paralysis disappeared, the patient's mental condition became normal, and she was dismissed cured. *B. J. Baron.*

KOCH'S TREATMENT OF TUBERCULOSIS.

WEBER (Halle)¹ reports: Most patients with laryngeal tuberculosis showed redness and swelling of the mucous membrane to a great extent, especially at the circumference of the ulcers. Necrotic eschars were not observed. All the patients had aphonia and abnormal sensations in the throat during the reaction.

LENZMANN² (Duisburg). A patient, forty years old, with tuberculosis

¹ Banist, &c.—Impfungen mit Koch's Lymphe in der Jahr 1890. "Deutsche Med. Woch.," 1891, No. 5.

² Ein Fall von vollkommen geheilter Kehlkopf-tuberkulose nach Behandlung mit Koch's Injektionen. *Edem loco.*

of the lungs (bacilli), consulted him on account of hoarseness. The otherwise pale laryngeal mucous membrane was red in the arytenoid region, and there was infiltration of the right ventricular band and ulceration of the vocal cord of the same side. Treatment with curettage and lactic acid was followed by clearing up of the large ulcer. After some injections of 0'001 to 0'005, local and general reaction followed. Fourteen days later, complete cure of the laryngeal affection was obtained. During the treatment a new affection of some parts of the lung was observed, but this disappeared some time later. The sputum still contains bacilli.

OSCAR BRIEGER (Breslau)¹ has especially studied the influence of the method on the mucous membrane affected with lupus. Of eighteen such cases, in six the larynx was affected. In all cases the reaction began with redness and swelling, increase of sensibility and secretion. Next day necrosis of the diseased parts followed, similar to the consequences of caustics. The most characteristic symptoms were observed in cases of primary lupus of the mouth and pharynx. In five cases of laryngeal lupus the same processes were observed, and in one of them a distinct stridor. Very characteristic was a case of lupus of the epiglottis.

BAÜMBER (Freiburg, Bavaria)² says, concerning laryngeal phthisis, that the local reaction was in such cases not at all so strong as in cases of lupus.

J. MICHAEL (Hamburg)³ relates his experiences with the medicament in eighteen cases in the Jewish Hospital in Hamburg. (Compare his paper in the January number.)

BURKARDT (Stuttgart)⁴ reports his experiences with the medicament in his hospital. Some of his cases have special interest.

Case 2 : A girl, seventeen years old, with tuberculous ulcers on the mouth and tongue, treated with the sharp spoon with rather good effect. After three injections the ulcers were cicatrized. Case 4 : Lupus of the hard palate complicating lupus of the skin. After 0'005, strong reaction, both general and local. Some days later, improvement of the diseased places. Case 9 : A lady, twenty-five years of age, with lupus of the skin, the mouth, palate and pharynx. After 0'005, strong local and general reaction. Improvement. Case 10 : A boy, fourteen years old, with tubercle of the lungs, the soft palate, pharynx and epiglottis. The soft palate and pharynx and epiglottis were treated some months before by the sharp spoon with good results, but there were already recurrences. After five injections, 0'0015—0'002, the granulations improved, the greater part of the mucous membrane became of normal appearance, and the other parts improved.

SCHNITZLER⁵ refers to a case of severe laryngeal phthisis. Five injections were followed by no general reactions, but by local reactions in the lung and the larynx (0'005—0'05). At first the larynx seemed to be improved, but a short time later the epiglottis, up till now healthy, became

¹ Einwirkung des Kochschen Verfahrens aus Schleimhautlupus. *Eodem loc.*

² "Deutsche Med. Woch.," 1891, No. 2.

³ "Deutsche Med. Woch.," No. 2.

⁴ "Württemberg Medicin. Correspondenzbl.," 1890, No. 33.

Wiener Med. Doctoren Collegium, Meeting, Jan. 26, 1891.

œdematous and tuberculously infiltrated. The lungs also became much more infiltrated. Likewise the posterior pharyngeal wall became tuberculous. In a second case of tubercle of the larynx, the whole condition deteriorated.

PRIOR (Bonn)¹ has treated ninety-four cases with the method. In this total there were ten cases of laryngeal tuberculosis. He is contented with his results, and believes himself to have obtained a real cure in two cases. The first of them, thirty-one years old, had redness of the whole mucous membrane of the larynx, swelling of the posterior wall, covered with ulcers, erosion of the right vocal band. A piece of the ulcers removed with the forceps contained bacilli in quantity. Injection of 0·001 produced strong reaction. All ulcers were covered next day with greenish masses; this disappeared, granulations arose, and now (two months later) the examination shows a nearly normal larynx. The voice, formerly hoarse, is now normal.

2. A lady, with ulcers on both vocal cords and on the epiglottis, treated by five injections (0·001—0·004) showed one month later a normal larynx.
3. In one case, with perichondritis of an arytenoid cartilage and œdema, the inflammatory tumour became much larger during the reaction (0·002). Next day the tumour was open, the necrotic cartilage had fallen out and only the sack of the tumour could be seen. The case seemed for thirty days to be cured, but afterwards a new irruption of the disease was observed.
4. In a case of bilateral perichondritis and beginning œdema of the glottis and tuberculous infiltrations, for which tracheotomy had to be performed, during the reaction the œdema of the glottis increased much, but afterwards the swelling diminished so that the state of the patient as regards his larynx was improved, but the lungs are very bad, so that the prognosis is unfavourable. The other cases are not reported *in extenso*. Their history is similar to that of the experiences of other authors.

At the Berliner Medicinische Gesellschaft meetings, January 7, 14, 21, and 28, the discussion on the treatment with Koch's method (compare in this Journal of January, 1891, the paper of B. Fraenkel) was continued.

(*Jan. 7.*) VIRCHOW believes the method a very dangerous one, by which the disease is spread in the organism, and acute universal phthisis is produced. Concerning the larynx, he believes that often swellings arise of sometimes unfavourable character, also conditions similar to phlegmon of the larynx and pharynx.

(*Jan. 14.*) B. FRAENKEL showed the patients mentioned in his paper. One of them died of tuberculosis of the intestine. The larynx shows extensive destruction in all parties on the posterior wall; the ulcers are bathed in pus. One of the patients is in good health; the improvement in the larynx has continued. The second, with lupus of the nose, improves more and more. The third must be considered as cured; there are no more bacilli; the ulcerations on the arytenoid cartilages are cured; general health perfect.

A. FRAENKEL showed a patient with exquisite tuberculosis of the tongue. The patient, twenty-five years old, had tuberculosis of the lungs

¹ "Munchener Med. Woch.," 1891, Nos. 4, 5, 6.

and hoarseness. Some weeks after the beginning of the injections he acquired ulcers of the tongue, and numerous miliary nodules of the mucous membrane of the mouth. The secretion was examined, and many tubercle bacilli found in it. There can be no doubt that the disease is spread by the treatment in parts which had been healthy before.

B. BAGINSKY showed a patient with an ulcer of the septum nasi, acquired by the use of the handkerchief of her tuberculous sister five years before. The affection was cured by scraping with the sharp spoon, but it recurred. After treatment with injections, there was strong reaction and new infiltration, with miliary tubercles of the tonsils and swelling of the glands of the neck. *Michael.*

Baratoux.—*Koch's Remedy in Laryngeal Tuberculosis.* "Le Progrès Medical," Dec. 13, 1890.

As regards the diagnostic value of Koch's lymph, the author states that lepers and patients attacked with syphilis and scarlatina react, and that in Vidal's clinic he has seen an epithelioma in a case of lupus take part in the local reaction, also several instances of inability to produce reaction in undoubted cases of tuberculosis of the larynx; he concludes, therefore, that its diagnostic value has been over-estimated. As regards its power to cure laryngeal tuberculosis, he does not believe that there is one case cured; he has seen grave complications due to swelling of parts of the larynx ensue after the injections. He considers that it is not prudent to inject patients suffering from marked encroachment on the glottis due to infiltration of the posterior commissure or swelling of the vocal cords. It is also dangerous where the epiglottis and ary-epiglottic folds are much swollen. Ulceration, consecutive to the exudation produced by the injection, was seen in the larynx, where previously there had only been slight tumefaction; superficial ulcers are stated to have increased in size and in depth. The author also believes that he has seen a case of acute miliary tuberculosis caused by inoculation, and he is evidently distinctly unfavourable to the use of the lymph. *B. J. Baron.*

Gilbert.—*Effects of Koch's Lymph on Tuberculous Affections.* "Rev. Med. de la Suisse Romande," Dec. 20, 1890.

THE author summarizes the contra-indications as follows :—

1. Miliary tuberculosis.
2. The third stage of tuberculosis.
3. Tuberculous patients with high fever.
4. Those tubercular cases that are very feeble.
5. Intestinal tuberculosis.
6. Tubercular meningitis.
7. Phthisis, with frequent and abundant hæmoptysis.
8. Where the kidneys are affected.

B. J. Baron.

WE have received the following communication concerning this treatment in Glasgow :—

"The Glasgow cases continue to be carefully watched, and the treatment is still being pursued. A complete report will be finally

"issued. Dr. Napier, of the Southern Hospital, reports very favourably of this treatment in two cases of lupus. In the Royal Infirmary, it is to be regretted that two of the cases of lupus, mentioned in the January number of this Journal, have been quite unsuccessful, although the treatment was pushed as far as it was deemed safe. At the time the last note was written both cases decidedly showed signs of improvement, and this continued for about a fortnight longer, but now they have relapsed, and may be said to be in much the same condition as they were before the treatment began. The Western Infirmary has now a plentiful supply of lymph, and a considerable number of cases are at present being treated.

"The well-known reactions have, of course, been seen by everyone here, but any beneficial results are spoken of with caution by the operators."

NOSE AND NASO-PHARYNX.

Blake (London).—*The Rhinometer; a Naso-Pharyngeal Sound.* "Lancet," Feb. 21, 1891.

A TAPERING spatula made for Dr. Blake by Messrs. Mayer and Meltzer. It is graduated in inches and in centimètres, and has marks indicating when it ought to reach the posterior nares and the back wall of the pharynx. By its means, and a little *tactus eruditus*, a good deal of information as to the presence and position of nasal obstructions may be obtained. It is convenient to carry in the waistcoat, may be used as a tongue depressor, and, as the inventor points out, is an excellent paper-knife. (Apart from its special uses, it would be a valuable companion to anyone who, being unfamiliar with the metric system, desired to acquire an objective acquaintance with millimètres and centimètres. A further suggestion is almost irresistible, namely, that by weighting it suitably at one end and balancing it on the edge of a penknife, it could be utilized for detecting deficiencies in the weight of suspected sovereigns, and thus, in a wider sense, justify its title of "Rhino"-meter). *Dundas Grant.*

Onodi.—*Curious Congenital Closure of the Nostril.* "Rev. de Laryngologie," Nov. 1, 1890.

THE author relates the case of a patient of eighteen years, in which an obstruction existed on the left nasal fossa with three small openings therein. By posterior rhinoscopic examination the left nostril was seen to be obliterated. The obstruction consisted of bone and cartilage, requiring the use of the saw and chisel before the passage was freed.

Joul.

Schaeffer (Bremen).—*Abscesses of the Nasal Septum.* "Therap. Monats.," Oct., 1890.

THE author treats the abscesses by incision of an elliptic piece of the

mucous membrane ; removal of necrotic pieces with the spoon, and antiseptic after-treatment. He mentions five cases cured in this manner.

Michael.

Cholmeley and Spencer Watson (London).—*Case of Asthma with Polypi and Hypertrophy of the Turbinate Bodies—Operation—Cure.* "Lancet," Feb. 21, 1891.

THE patient had suffered for eighteen years, and had been under treatment, but with no benefit. The nostrils were obstructed, but not completely. Mucous crusts covered the turbinates. The thorax was very emphysematous. The free application of a 20 per cent. solution of cocaine to both nostrils gave temporary relief. Clearance was effected by means of the snare and (under chloroform) of the ring-knife. The great success of the case is attributed by Watson to the sudden blow to the morbid habit following the very thorough clearance effected by the ring-knife, as compared with successive snaring operations.

Dundas Grant.

Olympitis.—*Tubercle of the Nasal Mucous Membrane.* Thesis, Paris, 1890.

A GOOD and complete work on the subject. The affection is studied in its primary and secondary forms. The etiology, history, symptomatology, diagnosis, and treatment are considered.

Joal.

Plicque.—*Tubercle of the Nasal Fossæ.* "Annales Maladies des Oreilles," Dec., 1890.

AN excellent review upon the subject. Nasal tubercle is comparatively rare, especially when one judges from forty observations which have been published. It is due, according to Koch, to the vibrating cilia ; according to Cornet, to the mucus which catches the bacilli and protects the granulation ; according to Michelson, to the structure of the sub-epithelial tissue. Tubercle in the nose presents two forms—tubercle proper and lupus. The former has three principal forms—granulations, ulcerations, and tumours—which the author has studied with great care. These three conditions are also present in lupus, and, contrary to the prevailing opinion, is often primarily in the nostril. Diagnosis depends upon the local lesions, general state, bacteriological investigation and inoculation. The treatment is surgical ; excising, scraping, and cauterization.

Joal.

Raulin.—*Backward Children and Nasal Disease.* "Rev. de Laryng.," Nov. 19, 1890.

AFTER a considerable study of cases of aprosexia, the author desires, first, that children should have a medical certificate on entering school ; secondly, that specialists should be asked to visit at times for the purpose of examination of the respiratory passages ; thirdly, that masters should direct attention to any signs of buccal respiration.

Joal.

Luc.—*Contribution to the Study of Angioma of the Nasal Fossæ.* "Archives de Laryngologie," &c., Dec., 1890.

PARTICULARS of a case of angioma of the septum obstructing the right nostril of a man, aged fifty years, removed by operation, are related. It

was partly removed by the gold snare, which caused a great deal of bleeding; the remainder was, however, taken away with the galvano-caustic snare almost bloodlessly. Microscopical examination showed that it was a taleangectatic myxoma, the spaces being capillary dilations lined with endothelium. A short time after the above case had been successfully treated Luc met with a second, and the galvano-cautery proved its value, as in the former patient. The author warns us against calling a mere varicose condition angioma without microscopic examination, as the former is comparatively common. He analyzes nine cases of true angioma reported by various authors as regards etiological cause, which is sometimes constitutional, but is in most cases spontaneous, and very rarely traumatic. Bleeding, copious and often repeated, is a prominent symptom, along with gradually increasing obstruction. The growth is rounded, more or less irregular on its surface, of red or bluish colour, elastic, and implanted on a large surface in the superior region of the nasal fossa, usually not very deeply. Pulsation in the growth has been noted, and is, of course, very important in diagnosis. If punctured, the blood drops out of the tumour without tending to spontaneous cessation. The recurring hæmorrhages present the greatest amount of danger, and after removal it may recur and bleed, and so shorten life. Jarvis's snare is recommended for removal, or the galvano-cautery loop.

B. J. Baron.

Eyssautier.—*Scraping of the Maxillary Sinus.* "Dauphine Med.," Aug., 1890.

A LADY, thirty-seven years of age, suffered for eighteen months from a painful tumour occupying the canine fossa, the intra-orbital region and left superior gum, and vault of the palate, and discharging at the level of the first molar. The tooth was extracted, and fœtid pus flowed from above. A fistula formed from the opening in the alveolar process, and a fracture was caused by the extraction. For a year afterwards the fistula discharged purulent matter into the mouth, and there was a fœtid smell from the nostril. The operator enlarged the opening from the maxillary sinus, extracted the second molar, and had it thoroughly washed antiseptically. The discharge speedily dried up. The mucous membrane was scraped with a small curette, and the surrounding granulations were removed. The surfaces were then painted with pure tincture of iodine, and the opening closed with a tampon. Four days afterwards this was removed, and recovery took place, which has been permanent.

Joal.

Lichtwitz.—*Diagnosis of Latent Empyema in the Antrum of Highmore, and Exploration by Washing.* "Bull. Med.," Oct. 26, 1890.

IN cases of latent empyema of the sinus the author makes a puncture through the nasal wall in the inferior meatus, four centimètres from the nasal spine. By washing this out one can see the pus returning from the natural opening of the sinus.

Joal.

Quenu.—*Caries of the walls of the Sphenoidal Sinuses.* Société de Chirurgie, Oct. 19, 1891.

OBSERVATIONS made upon a patient who had a sinus opening into the

middle of the nose. The fistula was scraped twice without success. The author then incised the membrane and made a further opening straight into the sphenoidal sinus. A drain was employed through the nasal wall to drain the pus, but the secretion rapidly dried up. The patient is quite cured and there is no trace of the surgical treatment. *Joal.*

Bennett, W. H. (London).—*Fibro-Sarcoma of the Naso-Pharynx*. "Brit. Med. Journ.," April 10, 1890. Clin. Soc. of London, April 11, 1890.

A MAN was shown, who had undergone operation several times. The salient points of the case were said to be (1) the first symptoms occurring as far back as 1866 in the form of profuse hæmorrhage; (2) the long intervals before recurrence took place; and (3) the histological changes in the growth during this long period, which, starting as a fibro-sarcoma, then became very full of spindle cells, and is now built up of mixed spindle and myeloid cells. *Hunter Mackenzie.*

Ragoneau.—*Adenoid Tumours and Stridulous Laryngitis*. Thesis, Paris, 1890. IN children a simple laryngeal catarrh often assumes the spasmodic character on account of vegetations in the naso-pharynx. This is the thesis put forward by Dr. Coupard. *Joal.*

Calmettes and Lubet.—*New Proceeding in Operation for Post-Adenoid Vegetations*. "Gaz. Hebdomadaire," Aug. 20, 1890.

THE authors propose the employment of bromide of ethyl instead of chloroform; the effects are passive, but sufficient for operations of short duration, and thus the patients are not exposed to syncope. They recommend Schmidt's knife, differing from Gottstein's in that the blade is not eccentric, and cannot cut the venous network underlying the seat of the vegetations, and thus prevents hæmorrhage. *Joal.*

Schaeffer (Bremen).—*Report on one thousand Adenoid Vegetations*. "Wiener Med. Woch.," 1890, Nos. 48, 49, 50.

REPORT based on all the questions concerning the disease, and on one thousand cases operated on by the author, on their complications and reflex neuroses. For the operation he now employs Gottstein's knife. *Michael.*

Chenieux.—*Fibrous Polypus in the Naso-Pharynx—Recurrence after removal*. Société de Chirurgie, Dec. 18, 1891.

OBSERVATIONS upon a patient, seventeen years of age, who presented great difficulty in respiration, exophthalmus, frequent epistaxis and anæmia. These were caused by a polypus in the naso-pharynx growing in the left side; prolonged to the left side between the left maxillary sinus and the pterygo-maxillary fissure. Tracheotomy was performed. The inferior wall of the left maxillary sinus was lifted up and the tumour removed. One year after the tumour had recurred. *Joal.*

MOUTH, TONSILS, PHARYNX, AND ŒSOPHAGUS,

Deichmüller (Moskow).—*Air-containing Tumour of the Cheek*. "Berliner Klin. Woch.," 1890, No. 57.

A PATIENT, nineteen years old, who was blowing glass, got a tumour of his right cheek. The examination showed an abnormally large opening of the stenonian duct. By incision, pus containing air was removed. Counter opening; drainage; cure. *Michael.*

Deichmüller.—*Another Case of Air Tumour of the Cheek* (*Wangenluft Geschwulst*). "Berliner Klin. Woch.," 1891, No. 2.

THE author has found in the literature the description of a case, observed by Tillaux in Paris, similar to his own. Compare the report in the last number of this Journal. *Michael.*

Demme (Berlin).—*Experiments on the accessibility of the Vertebrae of the Neck through the Mouth*. Inaugural Dissertation, Berlin, 1890, 31 pp.

IN the majority of the cases the fifth vertebra could be reached, sometimes also the sixth, sometimes only the fourth. The author has controlled his results by experiments on the cadaver. He has impressed his nail on the deepest part, and then by cutting seen which vertebra was reached. The arytenoid cartilages are generally in the plane of the fifth vertebra; the cricoid cartilage in that of the sixth vertebra. *Michael.*

Blackman, J. G. (Portsmouth).—*Pilocarpin in Dryness of the Tongue*. "Brit. Med. Journ.," June 14, 1890.

THE author recommends pilocarpin, gr. $\frac{1}{16}$ to $\frac{1}{32}$, in the form of a gelatine lamel, allowed to dissolve on the tongue, previously moistened with a sip of water. A moderate flow of saliva is thereby induced, which lasts for twenty-four hours. *Hunter Mackenzie.*

Toison.—*Lingual Tubercle by Secondary Inoculation*. Soc. Anatomique de Lille, Oct., 1890.

OBSERVATIONS upon a case of a patient suffering from tubercle, who wounded the tongue severely in his efforts to cough. The ulceration produced was examined microscopically and found to be tubercular. *Joal.*

Downie, J. Walker (Glasgow).—*Epithelioma primarily affecting the Tonsil*. "Brit. Med. Journ.," May 3, 1890.

THE author gives particulars of one case, and refers to two others seen by him during the last three years. He also refers to a case of sarcoma of the tonsil as a primary affection occurring in his practice. *Hunter Mackenzie.*

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Mackenzie, G. Hunter (Edinburgh).—*Case of Sarcoma of the Tonsil.* "Brit. Med. Journ.," June 21, 1890.

NOTES of the case of a man, aged twenty-three, who died from this disease (four months' duration). The author directs attention to the rarity of the disease, and to its resemblance, in the early stage, to simple enlargement of the tonsil. A microscopical illustration accompanies the paper.

Hunter Mackenzie.

Donelan, James.—*Supernumerary Tonsils.* "Brit. Med. Journ.," May 17, 1890.

THE author narrates the case of a gentleman, aged twenty-one, with supernumerary tonsils bilaterally and symmetrically placed below the normal glands, from which they were separated by the posterior palatine fold, at an interval of half an inch, and also that of a child, aged ten, with a single supernumerary tonsil situated in the middle line, immediately behind the uvula.

Hunter Mackenzie.

Rainford, H. (London).—*Temporary Stammering coming on with Tonsillitis.* "Brit. Med. Journ.," May 3, 1890.

THE author suggests that the stammering was due to (temporary) loss of power of co-ordination of laryngeal muscles, due to reflex causes.

Hunter Mackenzie.

Botey.—*Treatment of the Tonsils by the Galvano-cautery.* "Revista de Ciencias Medicas de Barcelona," May 25, 1890.

THE writer is in favour of this modern method of treatment, because the patient is often afraid of tracheotomy, with its serious hæmorrhage in adults.

He gives, as a reason, that the patient never demands a quick cure, but rather complete relief from the affection, and this without pain. The author almost exclusively uses this method except in large tonsils in the adult, or where a well-marked pedicle exists in children. Ten to fifteen sittings suffice, at intervals of four to six days.

Botey.

Hernandez, Tomas (Cuba).—*Canterization of Hypertrophied Tonsil by the Thermo-Cautery—Hæmorrhage.* "El Progreso Medico," Havannah, Oct., 1890.

THE author relates a case of a lady, twenty years of age, who had been operated upon by two professors in Havannah. The thermo-cautery was employed and the tonsil destroyed in one sitting, the base of the tongue being also touched. Eight days after, a serious hæmorrhage took place, placing life in peril. Dr. Hernandez was called in, and, after trying astringents, compression of the carotid, &c., the hæmorrhage was arrested by a pair of forceps improvised for the purpose. Each blade was covered with chamois skin. One arm was put inside the mouth to press against the part, and the other against the neck at the same point outside. An assistant kept the instrument in place. After four hours the hæmorrhage was arrested definitely. This case led the author to continue the method of treatment adopted. He finishes by recommending the tonsillotome with the constrictor of Maisonneuve. Dr. Hernandez has forgotten that

we do not use the Paquelin thermo-cautery now to extirpate the tonsils, and in one sitting. We use the galvano-cautery at several sittings, and thus do not fear hæmorrhage.

Boley.

Moire.—*Tonsillotomy and Hæmorrhage.* "Revue de Laryngologie," Dec. 19, 1890.

APROPOS of the recent thesis by Desiré, who is an enthusiastic partizan of tonsillotomy, Moire writes that in children it is necessary to give preference to the cutting instruments, when the glands are large, conspicuous, standing out from the side of the pharynx; in a word, when they are impairing the breathing. After cutting it is necessary to touch the parts with an astringent solution; to get the child to sleep as quickly as possible. In adults he recommends the thermo and galvano-cautery. He has often reduced these in two sittings, after the manner of Dodar, his pupil (Thesis, 1889).

Joal.

Lane, J. Ernest (London).—*Adhesion of the Soft Palate to the Pharynx, the Result of Syphilis.* "Brit. Med. Journ.," May 24, 1890. Harveian Soc. of London, May 15, 1890.

IN this case complete adhesion had taken place between the free border of the velum palati and the retro-pharyngeal wall. This condition is one of considerable rarity, though partial adhesions are not uncommon. Loss of taste and smell usually resulted. The exfoliated vomer and inferior turbinated bones from the same case were shown.

Mr. R. J. Carter showed a similar case in a man, aged thirty-two, who had had a primary sore sixteen years previously.

Hunter Mackenzie.

Legroux.—*Rhythmic Spasm of the Soft Palate—Rhythmic Spasm of the Fauces.* Soc. des Hôpitaux, Nov. 29, 1890.

THE author has observed a case of rhythmic spasm of nineteen years' duration. He had been cured of locomotor ataxy by specific treatment. The spasm was lateral. It was a true mystagmus of the curtain. The spasm was not synchronous with the pulse.

Joal.

Dieulafoy.—*Spasmodic Tick in the Fauces.* Soc. Med. des Hôpitaux, Nov. 7, 1890.

THE author speaks of a man, forty-two years of age, enjoying perfect health, in whom a spasmodic tick, well marked, could be seen in the soft palate, synchronous with the beats of the pulse. The patient only complained of slight uneasiness caused by the pulsation.

Joal.

Merklen.—*Infectious Phlegmon of the Pharynx and Larynx.* Soc. Med. des Hôpitaux, Nov. 7, 1890.

IN speaking of two cases of this affection, Merklen states that this disease, recently described by Senator, is not new. It is the sub-mucous laryngitis of Cruveiller—the acute phlegmonous laryngitis of Sestier. After having stated the symptoms of the disease, Merklen states that all the known cases but two have terminated fatally about the ninth day, resulting from an infection rather than an excitation of the pneumo-gastric.

Joal.

Höhlein (St. Petersburg).—*Case of Primary Acute Infectious Phlegmon of the Pharynx.* "St. Petersburg Med. Woch.," 1891, No. 2.

THE patient, thirty-two years old, suddenly got feverish and shivering (39° C.), had difficulty in swallowing, and a painful swelling in the pharynx. Next day there was a discharge of slightly foetid pus, with some improvement, but followed in a short time by swelling of the neck, cardialgia, and oppression of the breast. The same evening there was swelling of the glands and of the whole neck, somnolence, high fever (40°, pulse 104), death. The *post-mortem* examination showed purulent infiltration of the connective tissue of the neck, purulent fluid in the pleural cavities, fibrino-purulent pericarditis, hæmorrhagic erosions in the mucosa of the stomach, swelling of the spleen, sero-purulent mediastinitis. *Michael.*

Letuille.—*Venous Varix of the Œsophagus in Chronic Alcoholism.* Soc. Med. des Hôpitaux, Oct. 17, 1890.

THE author describes a case of alcoholism, the patient having died in the hospital after numerous and abundant hæmatemecses. At the *post-mortem* the Œsophagus was found to be the seat of numerous varicose veins. The stomach and the liver were healthy. The spleen was the seat of sclerosis. There existed also a thrombosis of the great mesenteric veins and embolus of the small one. Considering this observation and those of a similar nature published by other authors, the question arises if this condition is known in chronic alcoholism. It is necessary that the mechanism should be clearly elucidated. The hepatic cirrhosis habitually brought on may be wanting, as this case proves. It is more natural to explain this varicose condition by direct application of alcohol. *Joal.*

Letulle.—*Œsophago-Pleural Fistula.* "Semaine Med.," Oct. 19, 1890.

A LECTURE, given at l'Hotel Dieu, on a rare complication of pleurisy. A young man suffering from purulent pleurisy was operated upon for empyema, and, six days after the operation, food passed into the pleural cavity from the Œsophagus, and so insidiously as not to disturb the patient's general condition. The doctor thinks that the ulceration has begun near to the trachea and the right bronchus, that the patient is tubercular, and that the glands under the trachea and bronchi are tuberculous, and have ulcerated into the Œsophagus. *Joal.*

Puech.—*Phlegmonous Œsophagitis.* "Montpellier Med.," Sep. 1890.

A MAN swallowed a tablespoonful of a solution of caustic potash and soda. At the end of eight days he vomited a long tubular cast in two portions, one measuring twenty-four centimètres in length, and the other, triangular in shape, from the mucous membrane of the stomach, measuring twenty-two millimètres. The author thinks that the liquid produced a superficial cauterization, not amounting to eschar, but having provoked violent irritation in the membrane and its cellular surroundings, a veritable phlegmon was produced, removing the membrane and causing death. The autopsy has not been made. *Joal.*

Chencinski, Creslaw J. (Odessa).—*Foreign Body in the Œsophagus perforating the Aorta.* "Vratch," 1890, No. 41, p. 947.

A man, aged forty-three, while eating, swallowed a piece of bone, which ren-

dered deglutition totally impossible for three days. On the fourth day he was able to swallow liquids, and, shortly afterwards, solid food as well, the passage of the latter, however, being invariably associated with pain about the middle of the gullet. A few days later there supervened blood-spitting and blood-stained stools, while the pain increased. On the eleventh day after the accident, he sought admission to a hospital. During a preliminary verbal examination of the patient, about five hours after his admission, there suddenly occurred an enormous hæmorrhage from his mouth (blood welling up in a fountain-like fashion), which was followed by involuntary stools with much blood, and symptoms of acute cerebral anæmia, speedily ending in death. At the necropsy the digestive tract, beginning with the oral cavity, was found to be filled with blood clots. In the œsophagus, at the level of the bifurcation of the trachea, there was detected an angular, flat piece of bone, measuring 2 by 1·5 by 0·4 centimètres, lying horizontally, with its sharp, lateral angles fixed in the right and left walls of the tube. At a corresponding level, two deep sloughing ulcers, each 1 centimètre in diameter, were present, of which the left one communicated with the descending portion of the thoracic aorta, 2½ centimètres below the orifice of the left sub-clavian artery, the bone protruding into the aortic lumen. The opening in the vascular wall had a triangular shape, and measured 2 millimètres in diameter. With the exception of some ecchymoses around the perforation, the intima was normal.

Valerius Idelson.

Gil, Bernardo.—*Ludwig's Angina.* "Corres. Medico. Castellano," Sept. 10, 1890.

THE author described the case of a child, eleven months old, who suffered from a small tumour immediately under the angle situated exactly in the region of the sub-lingual gland. The sub-maxillary gland, the cellular tissue near the mouth, and the anterior part of the neck successively became inflamed, and produced a hard mass in these regions. It came on with high temperature, frequent and excessive pulse. The state of the child was very serious for a month; a gangrenous abscess formed in front of the neck, and under the inferior maxillary bone. The patient recovered.

The author is not quite sure if this was a case of Ludwig's angina, because the patient first suffered in the sub-lingual instead of the sub-maxillary gland.

Botey.

Michael.—*Diffuse Sub-Hyoid Phlegmon.* Soc. Anatomique, Dec. 19, 1890.

THE author records a case of death from asphyxia, where he had not time to perform tracheotomy in a man suffering from diffuse cellulitis of the sub-maxillary region, with intense collateral œdema. The cause of the sub-maxillary enlargement was dental. The sub-maxillary gland was healthy.

Joal.

LARYNX, &c.

Grant, J. Dundas (London).—*Papilloma of the Larynx*. "Brit. Med. Journ.," April 19, 1890. Hunt. Soc. of London, April 9, 1890.

CASE of a girl aged eight years. Partial removal of the growth had been accomplished by intra-laryngeal means. *Hunter Mackenzie.*

Beale, Clifford (London).—*A Case of Acute Obstruction of the Larynx after Convalescence from Broncho-Pneumonia*. "Brit. Med. Journ.," April 26, 1890.

THE case of a child, aged thirteen months, in whom acute inflammation and probably œdema of the larynx suddenly supervened, as stated in the title. There was no apparent cause for this, as tracheotomy was performed. Result—fatal. *Hunter Mackenzie.*

Fraenkel, E.—*Cancroid of the Larynx*. Aerztlicher Verein in Hamburg, Meeting Dec. 16, 1890.

Rumpel.—*Dilatation of Œsophagus*.

FRAENKEL showed a lentiform ulcerated cancrioid of the right sinus pyriformis of a patient sixty-eight years old. Some large glands of the neck were extirpated. The same physician showed a papillary epithelioma of the posterior wall of the œsophagus. In this case carcinomatous glands of the neck were extirpated. Death from recurrence. In both cases the primary tumour was latent and only the secondary were operated on. The cases prove that the size of the primary tumours is often without any proportion to the size of the metastatic glands. Therefore, in cases of glands of the neck, an exploratory incision should be made, and if it is proved by it that the process is a secondary one, no operation should be made.

RUMPEL showed a case of dilatation of the œsophagus in its lowest third. The patient was fifty-three years old, and had symptoms of stenosis for twelve years. During ten years he had applied bougies every day. The patient died from disease of the heart. Twenty similar cases are described. *Michael.*

Roehler (Berlin).—*Tumour under the Left Vocal Cord; by partial Laryngotomy the existence of Perichondritis is proved—Tracheotomy—Cure*. "Berliner Klin. Woch.," 1890, No. 53.

SOME days after the laryngotomy in a patient twenty-eight years old, on account of stenosis, a blue-reddish tumour was found in the left sub-glottic region; the patient coughed up some fetid pus, and then recovered, and could work. Further note by Dr. Landgraf.—Some time later the patient had a little dyspnœa, and consulted Dr. L., who found a granulation of the size of a pea in the anterior angle. He removed it with Bocker's catheter. *Michael.*

Polo.—*Gumma of the Larynx—Cure*. "Gazette Médicale de Nantes," Sep. 12, 1890.

A LARGE tumour, causing pronounced attacks of asphyxia. The patient

refused tracheotomy. In twenty-three days it was cured by subcutaneous injections of peptonate of mercury. *Joal.*

Sota, Ramon de la.—*Tertiary Syphilis of the Larynx and Trachea.* "Revista de Laryngologia, Otologia," Oct., 1890.

THE author describes the case of a patient, aged forty-nine years, who suffered from syphilis in the larynx, and trachea, and entrance of the large bronchi. Tracheotomy only slightly relieved the patient, and even bougies passed into the left and right bronchi did not give relief. In spite of mechanical and anti-specific treatment, breathing was difficult. The author believes with Solis-Cohen that this is due to syphilitic hyperplasia of the mucous membrane, and that death must sooner or later occur from apnœa in such cases. *Botey.*

Fasano, Prof. A.—*On the co-existence of Syphilitic and Tubercular Troubles in the Larynx.* "Archivio Internazionale di Laringologia, Rinologia," etc.

THE author relates a case in which a syphilitic man, twenty-five years old, after five years of the infection, presented symptoms of laryngeal consumption. No advantage from the local treatment. A valuable improvement took place after several hypodermical injections of sublimate.

Hence, Fasano concludes for a *simbroisi* (both tuberculosis and syphilis together), and recalls Massei's views on the same subject, to which the attention of this latter has been called since the year 1883.

Fasano limits himself to relating the history and accepting the possibility of the transformation of a syphilitic into a tubercular disease.

Massei.

Sota, Ramon de la.—*Six Cases of Intubation of the Larynx.* "Siglo Medico," Oct. 12, 1890.

THE first case was that of diphtheria in an infant, and ended in recovery. The second was better for a time after the introduction of the tube, but ultimately died. The same occurred in the third and fourth. The fifth had the common accident of blocking the canula. The author twisted the tube slightly, which brought on a severe paroxysm of coughing, and the false membrane was displaced. Dr. Ramon de la Sota is strongly in favour of intubation in diphtheria of the larynx. He believes that this method is better than tracheotomy, and friends do not object so much to it. *Botey.*

Blanc.—*Studies of the Lesions of the Recurrent Laryngeal Nerves and their Consequences.* Thesis, Paris, Oct., 1890.

A CONSCIENTIOUS work, presenting some new ideas, and a complete view of the pathology of the recurrent nerves. Blanc thinks, contrary to certain authors, that the zone of distribution of the recurrent nerve is not yet determined, as certain writers believe, and that its connections with the superior laryngeal are very numerous. The symptoms, diagnosis, etc., of the lesions of the recurrent are stated with the greatest care. *Joal.*

Barisien.—*Paralysis and Polypus of the Vocal Cord.* Thesis, Paris, 1890.

THE author enquires if one can distinguish, by functional signs, polypus

from paralysis, without having recourse to laryngoscopic examination. He finds that the diagnosis cannot thus be made without the expectoration of small fragments. *Joal.*

Löri (Pesth).—*Clonic Spasm of the Glottis of the New-born and Children.* "Allgemeine Wiener Med. Zeit.," 1890.

THE author reports upon the disease without bringing forward anything new of interest in the laryngoscopical examination performed in a child of two years of age. He observed that at the time of the deepest inspiration there suddenly arose a strong closure of the glottis, lasting for a second. *Michael.*

Girod.—*Effects of Atmospheric Pressure after Tracheotomy.* Clinique Française, Oct., 1890.

EXPERIMENTS made on the cadaver and in animals show that after section of the windpipe the calibre is diminished, and difficulty of respiration increased. It is to this cause that we must attribute the increase of dyspnœa which manifests itself at the moment of opening the windpipe in tracheotomy, and to this reason also must be attributed the accidents from asphyxia which are sometimes fatal after clearing the canula. The author counsels the cutting of a single ring of the trachea, and this being held by the neighbouring two, the above risk is diminished. He recommends cricoidectomy. *Joal.*

Delthil.—*Auto-inoculation consequent upon Tracheotomy.* "Journ. Med. de Paris," Dec. 7, 1890.

THE writer holds that the bronchial accidents and bronchi-pneumonias following tracheotomy are not only due to the surgical lesion, but also to the absorption and inoculation of poisons in the tracheal wound. Hence the conclusion to employ the thermo-cautery, and to act according to rigorous antiseptic rules. *Joal.*

Geffryer.—*Indications for Chloroform in Tracheotomy.* "Revue de Chirurgie," Dec. 20, 1890.

THE author believes in the use of chloroform in tracheotomy in infants. The method is not so frequently used in France. He has given it in eighty-seven cases, and the anæsthetic has not been badly taken, except in seventeen cases. The operation should be begun as soon as the skin does not react to the touch of the knife. Geffryer believes that chloroform in tracheotomy in infants does not present greater dangers than in others, provided that we watch the following indications:—Cyanosis accentuated without difficulty in respiration; slight cyanosis with difficulty of respiration; advanced asphyxia and prostration due to the diphtheritic poison. *Joal.*

Norton, H. Harvey (Reading).—*Tracheotomy under Difficulties.* "Brit. Med. Journ.," May 17, 1890.

THE operation having suddenly become necessary in the case of a man, aged thirty, who had for years suffered from laryngitis, the author performed it with his pen-knife, and made use of a quill tooth-pick for a tube. This was held in position for about an hour, when a silver tube was inserted. The patient did well. *Hunter Mackenzie.*

Pitts, Bernard, and Brook, William.—*On the Stenosis of Trachea and Larynx which occasionally follows the use of a Tracheotomy Tube, with Remarks on the Present Position of Intubation.* "Lancet," Jan. 10, 1891.

IN one case the trachea had to be reopened on several occasions, and the breathing was not satisfactory with either MacEwen's or O'Dwyer's intubation tubes. The wound was then extended upwards, the thyroid cartilage partially divided. There was found to be a band of fibroid tissue forming a sort of diaphragm, and a general overgrowth of fibrous tissue round the commencement of the trachea. The band was removed. The tracheotomy tube was in due course removed, but after a fortnight inspiratory stridor and occasional nocturnal distress came on, and ultimately the tube had to be resumed. Intubation was then tried, and gave relief, O'Dwyer's tube being left in for two days. It was then removed, and the tracheotomy wound was allowed to heal. After a fortnight's interval, the intubation tube was introduced, and left for twenty minutes. This was repeated once or twice at similar intervals, and the patient then remained perfectly well. From this case the deduction is that "with failure by simple intubation to restore the natural passage, a "free exploration of the tracheal wound should be made, and all cicatricial "tissue at once be thoroughly removed, and the passage thus prepared "for intubation, which should be then again employed and repeated from "time to time, until all tendency to recontraction has passed away."

In another case the obstruction was due to a mass of granulation tissue, and in a third and fourth to a dense collar of cicatricial tissue encroaching on the lumen of the tube.

The authors draw attention to the following points in connection with intubation for chronic stenosis :—1. Considerable force may have to be employed. In some cases asphyxia may be averted during the prolonged pressure by withdrawing the introducer for a short distance to allow a little air to enter, while the tube is pressed down by means of the forefinger, and then to renew the attempt at introduction. 2. A much larger tube may be used than the one adapted for the age in acute disease. 3. The tube may be left in for a considerable time—sometimes a fortnight. 4. In all cases where the tube is expected to remain in for more than twelve hours the string should be removed. 5. At first pulp food—excluding fluids—should be given. After a short experience the patients may take ordinary diet. 6. A shorter extractor than the one generally provided acts much more easily.

The present position of intubation is stated as follows—It is unsuitable for the following : 1. Obstruction caused by foreign bodies. 2. Active ulceration of larynx (syphilitic or tubercular). 3. New growths, especially malignant ones. [In multiple papillomata in children, causing dyspnoea, we are disposed to think intubation a valuable adjuvant—Reporter.] 4. Obstruction due to alteration in shape or position of the trachea caused by goitre or other tumour of the neck. 5. Obstruction by post-pharyngeal or other abscess of the neck.

Intubation is directly indicated in :—1. Simple cicatricial stenosis as from *old* syphilitic disease. 2. Scald, œdema or acute inflammation of the larynx. 3. Sudden spasm of the glottis, such as may occur during the

administration of anæsthetics. 4. Dyspnœa, as a means of diagnosis when it is uncertain whether it arises from obstruction in the air passage or from some condition out of reach—mediastinal tumour, bronchitis, etc. [A most satisfactory use of the process—Reporter.]

In diphtheria the authors hold (1) that intubation should be employed in cases which present themselves with dyspnœa as the most marked symptom of the disease, that it should be performed at an early period, and that should there be necessity for retaining the tube for a length of time, or evidence of any direct irritation set up by it, then tracheotomy should be substituted (remarking that tracheotomy is rendered safer and easier of performance when an intubation tube is *in situ*), but (2) that tracheotomy is advisable in those cases where there is evidence of great malignancy, or of a tendency to great extension of membrane.

Dundas Grant.

Josserand. — *Retro-Laryngeal Abscess: Pneumo-cocci and Pneumonia.*
"Provence Med.," Aug., 1890.

THE author observed two cases of this affection, which is rare, and gives the following description:—The patient in full health is suddenly seized with fever, pain in the larynx and hoarseness. In a day or two the symptoms are limited to this. Then the voice becomes more impaired, often amounting to aphonia, and swallowing is impossible. The dyspnœa rapidly augments, and may take on the character of asphyxia. On the second day the patient, perhaps, is threatened with suffocation, and tracheotomy may be necessary. The general state of *malaise* increasing the fever augments, and delirium may appear; pus rapidly forms, and in one case it could be diagnosed two days after the event. It breaks into the larynx, and the patient coughs up some purulent expectoration, which is regarded as a critical phenomenon, and resolution follows, but the breathing and general condition may become serious.

Laryngoscopic examination shows diffuse redness of the pharynx. The arytenoid cartilages and the ary-epiglottic folds are tumefied. The superior opening of the larynx is reduced to a mere line; the epiglottis is twisted and deformed; frequently the affection terminates in death in a few days. At the *post-mortem* pus is found in the sinuses adjoining, and, it may be one or several patches of hepatization in the lungs. The pneumococci of Fraenkel will be found in the pus.

Joal.

Dreschfeld, J. (Manchester).—*Unusual Form of Aortitis and Thoracic Aneurism.*
"Brit. Med. Journ.," April 26, 1890. Path. Soc. of Manchester, April 16, 1890.

A PECULIARITY in this case was the expiratory character of the dyspnœa. This was explained, on autopsy, by the nature of the lesion. The aneurism had caused erosion of the lower rings of the trachea, and part of the wall of the trachea formed the posterior boundary of the aneurism. The trachea had ceased to be a rigid tube, and with every expiration the aneurism, which bulged into the trachea, was pressed against the posterior wall of the trachea, and partly occluded it.

Hunter Mackenzie.

THYROID GLAND, NECK, &c.

Lenike (Hamburg).—*Surgical Treatment of Basedow's Disease.* "Deutsche Med. Woch.," 1891, No. 2.

IN two cases of severe morbus Basedowii (one of them had marked stenosis of the trachea, the other very pronounced exophthalmos) the author removed one-half of the thyroid gland. The first patient, seventeen years old, was cured; the second much improved, especially the eyes. The author recommends the surgical treatment. *Michael.*

Davies, Arthur (London).—*Bronchocele.* "Brit. Med. Journ.," May 3, 1890. Hunt. Soc. of London, April 23, 1890.

THE author showed three cases of bronchocele. Mr. Hovell said that the internal administration of iodine, commencing with five minims of the tincture, with hydrochloric acid and glycerine, thrice daily, answered well in simple glandular cases. When the gland was fibrous, injections of tincture of iodine was the best treatment. Dr. Hingston Fox referred to the connection between disorders of the thyroid gland and menstruation.

Hunter Mackenzie.

Davies, Arthur.—*Cases of Goitre.* "Brit. Med. Journ.," April 10, 1890. Clin. Soc. of London, April 11, 1890.

TWO sisters were exhibited, aged twenty-seven and thirty years, in whom the affection began at the ages of fifteen and twelve years. There was a family history of epilepsy. *Hunter Mackenzie.*

Jaccoud.—*Etiology, Prognosis and Treatment of Exophthalmic Goitre.* "Gazette des Hôpitaux," Nov. 20, 1890.

TWO etiological factors alone deserve notice, viz., mental emotions, such as shock, or prolonged depression, and heredity. The latter is very frequently seen—*e.g.*, all the children (eight in number) of a hysterical mother suffered, and three cases of exophthalmic goitre were seen in the children of these people, as well as hysteria and epilepsy in two others. Anæmia also plays an important rôle. The disease is more frequent in women than in men, and between twenty and thirty years of age. Prognosis is always very serious, and the malady ends fatally in one-fourth or one-fifth of all cases, more or less rapidly, and from marasmus, due especially to incessant cardiac activity, and also in a less degree to digestive troubles—vomiting, icterus, diarrhœa; urinary troubles—albuminuria, glycosuria. Fournier and Ollivier have described multiple gangrene as having occurred. As to treatment: If there be anæmia, it must be combated with iron; if it be absent, then iron is hurtful; and it must be remembered that in advanced stages of the disease it is a result rather than a cause. Hydro-therapeutics and electricity are of the greatest value. The douches ought at first to be tepid, or even warm, and only gradually reduced in temperature until they are administered cold, and they should be of only twenty-five to thirty seconds' duration to begin

with, and given daily. The best form of electricity is that of weak continuous ascending currents on both sides of the neck. Charcot recommends simultaneous galvanization of the præcordial region and faradization of the neck. Arsenious acid, bromide of potassium, and milk diet are all of use. The application of ice over the præcordiæ and neck must be most carefully watched, as there is considerable danger of inflammation and sloughing of the skin over the thyroid body, stretched as it is by the disease.

B. J. Baron.

Turner, G. R. (London).—*A Case of Thyroid Tumour, apparently Malignant, which all but disappeared after Tracheotomy — Renewed Growth in an undoubted Sarcomatous Form.* "Brit. Med. Journ.," May 31, 1890. Clin. Soc. of London, May 23, 1890.

NOTES of this case were read. A man, aged sixty-two, had a thyroid swelling of six months' growth, causing by its pressure on the trachea considerable dyspnœa. The trachea was pressed over to the left side, and was opened behind the manubrium, so far from the surface that an ordinary tracheotomy tube could not be inserted, and a No. 12 gum catheter was used instead. The tumour, apparently malignant, decreased in size after the tracheotomy, and all but disappeared. There was no evidence of any cystic, inflammatory, or blood extravasation enlargement in the tumour. Two months subsequently the tumour again enlarged, and its removal was attempted, but its connection would not permit of this being accomplished. Microscopical examination showed it to be undoubtedly sarcomatous. A second tracheotomy was followed by a second shrinkage of the tumour, due this time to a rapid disintegration of its cells. The patient died one month afterwards. *Post-mortem* examination showed the thyroid body, which was hardly enlarged at all, to be occupied, or rather replaced, by a breaking down sarcomatous mass, which had infiltrated the trachea and neighbouring structures, but of which there were no secondary deposits elsewhere. The author referred to cases of disappearance of sarcomata after erysipelas recorded by Bruns, and in those cases of malignant disease of the thyroid where tracheotomy was extremely difficult or impossible a free division of the fascia and parts over the tumour was advocated.

In replying to the discussion, the author said that the possibility of the tumour being of an inflammatory nature had crossed his mind, but had been dismissed as unsupportable by clinical evidence.

Hunter Mackenzie.

Feulard.—*Congenital Myxœdema.* Soc. de Dermatologie, Nov. 13, 1890.

OBSERVATIONS upon a patient who presented all the characteristics of the affection described by M. Bourneville under the name of "idiotic myxœdematuse." She was aged nine-and-a-half years, and was eighty centimètres high. The pathological history was complete—dolicocephalic, thick lips, pseudo-lipomatous tumours of the neck, scoliosis, eczematous eruptions, absence of the thyroid gland. No history of nervous ailments on the side of the parents. In 1870, the mother, when pregnant three months, suffered from a severe shock by the Prussians attacking the house, and threatening to shoot her husband. She was delivered at six

and a half months, and the child was very small, and developed very slowly, her first tooth not making an appearance until the fourth year. The idiocy is not complete. The patient can reply to questions, but is of a taciturn nature. *Joal.*

Helary.—*Multilocular Serous Cyst of the Neck.* Soc. Anatomique, Nov. 19, 1890. THE author describes a case of multilocular serous cyst of the neck extirpated by Mr. Walter. The tumour had already been operated upon by one of his *confrères*, with the result that considerable inflammation and swelling of the tumour took place—dysphagia, dyspnœa, and convulsions set in. The tumour was as large as the head of a child aged six months. *Joal.*

Winter (Vienna).—*Apparatus for administering Anæsthetics to Tracheotomized Patients.* "Wiener Med. Klin.," 1890, No. 45.

A MODIFICATION of Junker's apparatus. *Michael.*

Dewar, Mackellar.—*On the Clinical Demonstration of Diseases of the Throat and Nose.* "Glasgow Med. Journ.," Nov., 1890.

J. Macintyre.

Haug.—*A simple Ear Larynx and Nose Phantom.* "Berliner Klin. Woch.," 1891, No. 2.

DESCRIPTION of the instrument. *Michael.*

Rosenthal (Berlin).—*On Epistax's.* "Deutsche Med. Zeitung," 1891, No. 3.

REPORTING article. *Michael.*

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126 *The Journal of Laryngology and Rhinology.*

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CARD specimen. *Hunter Mackenzie.*

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Handford, H. (Nottingham).—1. *Perichondritis of the Larynx with Sub-glottic Abscess*. 2. *Perichondritis, the result of Enteric Fever*. 3. *Tubercular Laryngitis*. 4. *Oedematous Laryngitis from a Syphilitic Subject*. "Brit. Med. Journ.," March 22, 1890. Nott. Med. Chir. Soc., March 6, 1890.

SPECIMENS exhibited. *Hunter Mackenzie.*

Gillet.—*Intubation of the Larynx*. "Rev. Gen. Clinique et Therap.," Nov. 26, 1890.

REVIEW of the operation and history of the question. *Joal.*

Biedert (Hagenau).—*On Tracheotomy*. "Verhandlungen der Gesellschaft für Kinderheilkund." VII.

NOTHING new. *Michael.*

Lees (London).—*Case of Myxædema*, "Brit. Med. Journ.," March 15, 1890. Harveian Soc. of London, March 6, 1890.

EXHIBITION of a case of seven years' standing. *Hunter Mackenzie.*

Robinson (London).—(1) *Myxædema of Larynx*; (2) *Tumour of Larynx*; (3) *Ulceration and Perichondritis of Thyroid Cartilage*. "Brit. Med. Journ.," March 8, 1890; Path. Soc. of London, March 4, 1890.

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Ord, W. (London).—*Case of Sporadic Cretinism—Case of early Myxædema in a Young Woman*. "Brit. Med. Journ.," Feb. 22, 1890. Clin. Soc. of London, Feb. 14, 1890.

EXHIBITION of cases. *Hunter Mackenzie.*

Barker, Arthur E. (London).—*Removal of a very large Tumour from the Neck, probably a diseased accessory Thyroid Gland—Recovery*. "Brit. Med. Journ.," June 21, 1891.

RECORD of a case, with illustrations. *Hunter Mackenzie.*

REVIEWS.

Principles of Surgery. By N. SENN, M.D., Ph.D., Milwaukee, Wis. F. A. Davis, Philadelphia and London.

IN the "Medical News" of December 27, many would read with regret that Dr. Nicholas Senn had seen fit to resign his Chair of Principles of Surgery and Surgical Pathology in the Rush Medical College, Chicago, after having held it for three years, on account of the refusal of the authorities to allow him to take a hand in the clinical work, and give practical demonstrations as well as lectures. That regret will be shared most cordially by the readers of the work now under review, a work no

doubt the result of the stimulus afforded by the professional position occupied by the author. At the same time, it is quite possible that had the writer's clinical opportunities led him more exclusively into the engrossing fields of clinical practice, we might not now have had the privilege of reading such a well-thought-out *exposé* of the theory of surgery from the study of the man whose name is best known to us as the inventor of what it is probably not too much to call an epoch-making device in the field of the surgery of the alimentary canal. It is refreshing to find the philosophical theorist and the ingenious practitioner thus combined in one person. The volume before us is intended to impart those principles, the possessor of which "will have no difficulty in applying his" knowledge in practice, while the one who has burdened his memory "with numerous details to meet special indications is always at a loss in" making prompt and judicious use of his therapeutic resources when confronted by rare lesions or unexpected emergencies." Again, the author professes to connect the modern science of bacteriology more intimately with the etiology and pathology of surgical affections than has hitherto been done by most authors who have written on the same subject. In this latter aim he proposes a task requiring all the powers of a calm and judicial mind, and the sifting of the facts, observations, deductions, and imaginings, so as to lay a clear and convincing statement before his busy *confrères*, has been accomplished to admiration.

The phagocyte theory finds a warm supporter in the writer, "whether the microbes are digested by the protoplasm, or whether some chemical substance in the cell-body exerts an inhibitory effect upon them, or, finally, whether for want of a proper nutrient material they are starved, as it were (p. 110)." Chapter V., on Pathogenic Bacteria, is a most interesting account of the principal forms of bacteria, and the most important observations regarding their life history and relations. Cohn's calculation that a single coccus multiplying by fission would in one day produce sixteen millions of cocci, in two days two hundred and eighty-one billions, and at the end of three days forty-seven trillions, is reproduced as giving a striking conception of the rapidity of multiplication of these organisms.

The pathogenic bacteria are credited with two actions—to abstract from the fluids and cells of the body a part of their essential constituents, e.g., albuminous substances, carbo-hydrates, &c., and to produce in the body toxic agents (ptomaines) from their action on the albuminous substances. These ptomaines are readily absorbed, and when introduced into the circulation produced fever and symptoms of sepsis, while locally they have such effect as the transformation of leucocytes and embryonal cells into pus-corpuscles. The conditions, as stated by Watson Cheyne, upon which depend the preservation of health in the event of the entrance of pathogenic microbes into the body are summed up as: (1) smallness of the number of microbes introduced; (2) absence of a *locus minoris resistentiæ* (the paragraph on the localization of bacteria in injured parts is of great surgical interest); (3) active elimination through the excretory organs.

The occurrence of traumatic suppurative strumitis (thyroiditis) in a hyperplastic struma (bronchocele) is explained by Kocher on the theory that altered circulation in the injured part determines in it the localization of the pus-microbes floating in the blood current. One of the most interesting illustrations of the influence of trauma in determining the localization of microbes is the experimental observation of Orth and Wyssokowitsch, that staphylococci could be injected into the blood of a rabbit without apparent injury to the animal, but if before the injection a slight mechanical injury was inflicted on one of the valves of the heart, typical endocarditis was at once produced. The direct antagonism existing among certain kinds of micro-organisms is described, and hopes

are entertained that prophylactic inoculations with harmless microbes may afford a means of securing immunity from infection by pathogenic microbes. Unfortunately, it is also brought out in the paragraph on "secondary or mixed infection that antecedent pathological products may "serve the same purpose in the body as trauma in determining localization of bacteria, and, further, that a more direct relation may exist "between the different microbes, so that one prepares the soil for the "growth of the other, as the pneumococcus for the tubercle bacillus." Schnitzler's observation that the syphilitic ulcer in the larynx furnishes a good culture soil for the bacillus of tuberculosis, is quoted as a further example. The active elimination of bacteria by the excreting and glandular organs, the kidneys and the salivary glands, is made accountable for the occurrence of pyelitis and parotitis, after suppuration elsewhere.

Numbers of observations of immense interest, but too numerous to now refer to, are to be found on almost every page—thus, the fact that the pus produced by the action of such chemicals as croton oil or turpentine has a destructive effect on pus microbes; again, that when gelatine cultures are over-saturated with albumen or peptone (or albumose?), pus-microbes cease to multiply. The effects of inoculations with the ptomaines of pus-microbes, the description and specific action of the different pus-microbes, are fully detailed, and the objects clearly illustrated. In the midst of what may appear matters of mere pathological speculation, the practical reader will be refreshed by the lucid description of the vigorous methods of treatment recommended by the author.

If this work obtains any approach to the circulation which it deserves, it will be, to many experienced practitioners, the means of opening up a wide field of new material for grateful study, and we venture to believe it will invest many well-worn topics with a new and enthralling interest. Many will feel inspired with an increased energy in carrying out the details of their work, if founded on the principles of that aseptic or antiseptic surgery which owes its initiation to Lister's almost prophetic anticipations of the wonders of modern bacteriology.

The book is well got up, and clerical errors are so rare that it is almost worth while to point out that on the 20th line of page 129 the word "streptococcus" ought to be "staphylococcus." The author is most loyal in giving the name of every observer, experimenter or writer from whom he quotes. Would he be persuaded to give in his next edition the references to book, chapter and verse, so that the reader desiring to consult the originals might do so? Some such short method as is adopted by our Hamilton, in his Text-book of Pathology, would be found easily applicable. Again, a well-classified table of contents would be found most valuable to the student, not to mention that it would greatly facilitate the work of the reviewer.

The illustrations are numerous, clear, and judiciously "selected" (with permission, we trust) "from modern text-books not readily accessible to the average student," the latter fact greatly increasing the value of a work which we hope soon to see in many hands.

Pfeiffer (Leipzig).—*Die Behandlung der Kehlkopf und Lungentuberkulose mittelst Parenchymatoser Injectionen nebst einer neuen Hypothese über die Tuberkulose Lungenspitzenkrankung. Veit u Comp: Leipzig, 1890. 60 pp. (The Treatment of Tuberculosis of the Larynx and the Lungs by Parenchymatous Injections, and a new Hypothesis on Tuberculous Disease of the Apices of the Lungs.)*

THE book appeared before the publications of Koch, and I began to believe that there would be no longer any reason to report on such antiquated matters; but as now we see that the cure of phthisis is not so

easily obtained as we believed at first, we shall therefore do well to consider also the views of others than Koch who try to find a method of cure for this obstinate disease.

The predilection of the apices of the lungs as the initial point for tuberculosis has given rise to a number of theories. The author does not believe that the theories of Freund, Ruble, and Mordhorst are so well founded that they are probable. He has therefore stated a new theory, which he calls the "pleurogen" infection. He believes that the tubercle bacilli enter the body by the irritated but intact mucous membrane, a mode imitated by Cornet, in animals, by the mucous membrane of the nose or mouth. From thence the infection is spread by the lymphatics and glands on the pleura, and that from the pleura the lung itself is infected. In the same way also the infection of the larynx is produced, and thus there is manifested disease of the lung and larynx on the same side. Naturally he does not doubt the possibility of the acquisition of phthisis by inhalation, but he believes that the usual way is by lymphatic infection.

As the disease begins in the sub-mucous tissue, the treatment also must be directed to the cure of these parts. For this purpose the author uses the balsamum Peruvianum in form of an emulsion, as combined by Prof. Hagen. The first who applied this balsam for intra-venous injections in tuberculous disease and intra-articular injections was Landerer.

For two years the author has been prescribing inhalations of this emulsion in laryngeal phthisis; but he also applies the same emulsion as sub-mucous injections in the larynx with Heryng's syringe. Five or more injections are necessary to bring about a success. Each injection consists of several drops applied in the diseased places. Of seven cases in which the method was applied, the author saw a real cure in one case—a lady aged thirty-seven, with tuberculous infiltration of one ventricular band. The patient, cured by sixteen injections, has been under observation one and a half years, and is still in good health. In seven other cases the author has applied an emulsion of creosote for sub-mucous injections. Here also he obtained, in some cases, an improvement. *Michael.*

Jurasz (Heidelberg). — *Die Krankheiten der Oberen Luftwege, &c.* (*The Diseases of the Upper Air Passages: Clinical Observations and Experiments, collected in the Clinic for Diseases of the Larynx, Pharynx, and Nose*). With woodcuts. Part I. Carl Winter, Heidelberg, 1891, pp. 107.

THE author, who has since 1874 carried on his work in his Policlinical Institute at Heidelberg, describes the most interesting of the cases he has observed, and his methods of treatment. Under the head of insufficient development, he describes excessive softness of the nasal cartilages, the nose being of normal form, but with unnatural want of resistance. In combination with acromegaly he saw in one case "nasomegaly," there being enormous enlargement of the external nose and bones. In two cases there was obliteration of the external nose by caustics; in one case enormous distension of the right nostril by an unusually large polypus. There are four remarkable cases of tuberculous ulceration of the skin of the nose. The sixth chapter contains cases of extensive nasal syphilis; the seventh, a case of rhinitis crouposa. The eighth chapter is an extensive treatise on the different forms of nasal catarrh, and their complications and treatment. Reflex neuroses were observed in only a relatively small number of cases. Concerning ozæna, the author believes the discharge has the characteristic odour as soon as it is secreted, and does not acquire it by putrefaction. He considers the disease curable by means of careful treatment. In the ninth chapter the author relates his observations on deviations of the cartilaginous and osseous septum, and the different methods of treating them. Perforations and defects in the septum are mostly caused by syphilis, more

rarely by lupus, rhinoliths, or polypi. The idiopathic perforating ulcer of the septum was not found in a single case. Hæmatomata (eleventh chapter) were observed in six cases, and were in all the result of traumatism. Two cases of idiopathic perichondritis of the septum (twelfth chapter), a very rare affection, were observed. Synechiæ (thirteenth chapter) were found in thirty-six cases, of which thirty-five were solitary. In one case only there was osseous adhesion, a congenital one, the others being all acquired, and chiefly in consequence of surgical operations. Of two hundred and fourteen cases of mucous polypus (fourteenth chapter) thirty-one presented reflex neuroses, such as headache, vertigo, cough, asthma, &c. Papillomata were observed in thirteen cases, fibromata in three, angiomas in two. There were eleven cases of malignant tumours, nine being sarcomas and two carcinomas. Three patients with hard tumours of the septum refused all operation. Six cases of foreign bodies (fifteenth chapter) and two of rhinoliths are described. For the treatment of epistaxis the author recommends the anterior nasal tampon, with liq. ferri, one part to two parts of water. If the septum is the seat of the hæmorrhage he considers the application of a small piece of amadou the best treatment. He holds the opinion that no good effect is obtained from the galvano or nitrate of silver caustic recommended by many authors [?—Reporter]. Among diseases of the accessory cavities (seventeenth chapter) he observed twenty-two cases of empyema of the frontal sinus, generally accompanied by hypertrophy of the middle turbinated body, closing the naso-frontal duct. There were five cases of empyema of the antrum, and two of sarcoma in that cavity. In one case empyema of the cuneiform sinus was diagnosed as most probable; in another, suppurative disease of the cribriform plate was exposed by galvano-cauterization of the middle turbinated body, and cured by irrigations. A relation between nasal diseases (ozæna, epistaxis) and the functions of the female generative apparatus (eighteenth chapter) was made out in five cases. *Michael.*

Fraenkel, B.—*Gefrierdurchschnitte zur Anatomie der Nasenhöhle.* (Frozen Sections showing the Anatomy of the Nasal Cavities.) Vol. 1. Berlin, 1890. Hirschwald.

GREAT praise must be accorded to the manner in which the illustrations in this work are executed. Six horizontal sections through the frozen head are reproduced by means of photogravure. This is the first time the reporter has seen this process applied to medical drawings, and he feels bound to say that when it is employed with such a degree of technical perfection no more suitable method could be adopted. Each line and point of the original is distinct, and the result is more pleasant for study than ordinary photography, inasmuch as there is not the glossy surface. The author made these instructive sections, in the first place, for demonstration purposes in his courses of laryngo-rhinology, and the medical public is much indebted to him for having made them now accessible to them. An inspection of them will clear up many difficult anatomical points. The first half just published contains six plates, derived from sections made in four horizontal planes; to these a short explanatory text is appended. A second part, containing the frontal and sagittal sections, will complete this instructive atlas. *Michael.*

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TWENTY CASES TREATED BY TUBERCULIN.

By SIR MORELL MACKENZIE,

Consulting Physician to the Hospital for Diseases of the Throat, and
formerly Physician to the London Hospital.

IN carrying out the treatment by Koch's fluid, I must express my best thanks to my colleagues at the Throat Hospital, especially to Dr. Bond, for placing cases at my disposal, and for the interest they have shown in watching the results. I must also acknowledge my great obligation to Dr. William Rawes, demonstrator of physiology at the London Hospital Medical College, for making dilutions and arranging the dosage of the tuberculin, as well as for the great trouble he has taken in making repeated examinations of the *sputa* of the patients whilst the treatment has been going on. To Mr. Milson Rees, resident medical officer of the Throat Hospital, Golden Square, to Mr. Curling Bates, and to Dr. Arthur G. Root, of Albany, U.S.A., I am specially indebted for the great zeal and care which they have shown in taking notes, making sphygmographic tracings, and keeping hourly temperature charts, as well as for making frequent and minute examinations of the patients.

RETROSPECT.

I. The experiments were made on twenty cases, and of these, nine patients were suffering from pulmonary, or laryngo-pulmonary, phthisis, seven from lupus, and in four the experiments were carried out for purposes of diagnosis. The period of treatment extended over four months.

2. With the exception of two of the earliest cases, in which the treatment was made at the urgent request of the patients, who had carefully studied everything which had been written on the subject, the patients were carefully selected. Many others were rejected because the disease was too far advanced, and some because, though there was evidence of long-standing disease, the morbid process was quiescent at the time the patients presented themselves.

3. No other medical treatment than the injection of tuberculin was adopted, except that some of the phthisical patients wore inhalers containing carbolic acid at intervals for six hours daily.

4. No accident or immediately unfavourable result supervened, except that in one case (A) severe dyspnœa, apparently from spasm of the smaller bronchial tubes, and in another case (P) spasm of the glottis occurred. Of the sixteen cases treated (phthisis and lupus), eleven were benefited, four were unfavourably affected, and in one no benefit resulted.

5. In the phthisical and laryngo-phthisical cases, bacilli were found in every instance before the treatment was commenced. After one or more injections, the bacilli were found to be curved or irregularly bent, and in some cases apparently broken into smaller fragments.

6. The sphygmograph was used in most of the cases, and during the fever following the injections, except in one case, the tracings showed a pulse of exceedingly low tension, with a markedly dicrotic wave; in some instances, indeed, there was marked hyperdicrotism, such as is only seen in the severe and long-continued febrile diseases. In the exceptional case (F) referred to, the pulse became dicrotic in the intervals between the fever, whilst during the reaction it was firmer, and indeed almost normal.

7. In the phthisical cases, there were two in which the disease was confined to the lungs, and seven in which the lungs and larynx were both affected.

8. In the purely pulmonary cases, one was "much improved" and the other "improved."

9. In the laryngo-pulmonary cases, one patient was "much improved," one "improved," four "unfavourably affected," and one "not improved."

10. The phthisical cases which were either "much improved" or "improved," the improvement was not greater than is occasionally seen, both in private practice and in hospitals, after a few weeks of other treatment, combined with rest and suitable food.

11. Of the four cases of laryngo-pulmonary phthisis unfavourably affected, two died. In one of these cases the death took place seven weeks, and in the other, six weeks, after the last injection. In both these cases death was believed to be accelerated by the injections. Attention must be called to the fact that, in both of these subjects, cavities existed in the lungs before the treatment by injection was commenced, and that it was only carried out at the earnest desire of the patients.

12. In the case which is returned as "not improved," the condition of the lungs was slightly ameliorated. The larynx was better at one part but worse at another. The general health had slightly declined.

13. The effect on the lungs from twenty-four to thirty-six hours after an injection was, in nearly every case, an increase of crepitation at the spot affected, and an extension of the area of crepitation. This was subsequently followed in the favourable cases by a drying up of the moist sounds and by a contraction within the original limits of the area of crepitation. In the unfavourable cases the area of crepitation did not contract after injection, and the softening resulted in the formation of cavities.

14. When any effect was produced on the larynx by injections, great redness of the mucous membrane usually occurred.

15. In three out of the seven cases, circumscribed acute œdema took place, but in no instance was any dyspnœa produced.

16. The natural tendency of the disease in laryngeal phthisis being slow, and the deposit being generally rather dense, the local appearance is usually somewhat anæmic; in the cases treated by tuberculin, the deposit or exudation was thinner, the vessels more injected, and the morbid process more acute.

17. In the seven lupus cases treated, every patient has been benefited, though no case can as yet be said to be completely cured.

18. The effect of the injections was more marked on the skin than on the mucous membrane, and also more active on the mucous membrane of the nose and lips than on that of the larynx.

19. The local reaction and general rise of temperature was much higher in lupus than it was in the pulmonary and laryngeal cases, but in the end the lupus cases tolerated much larger doses.

20. In one case, after 10 c.c. injected into the back had produced no effect, .002 c.c. injected into the turbinated body caused a decided local reaction and general rise of temperature.

21. In all the patients treated, in addition to other food, an abundant quantity of milk was allowed. Wine was given in several cases.

22. Before entering the hospital, one or two of the patients had been insufficiently fed, and one had continued to work when not in a fit condition of health.

23. The general result of injections as an aid to diagnosis was on the whole satisfactory, but it cannot be said that any great gain resulted from the use of the tuberculin—that is to say, the conclusions would have been just the same in every case, except one, even if no injections had been made. In the case referred to, although there was every reason to think that phthisis was present, no reaction took place, but as there was no expectoration, and therefore no possibility of determining the presence of bacilli, it cannot be said that the value of an injection for diagnostic purposes was invalidated.

24. Whilst the injection of Koch's fluid may not have deserved the enthusiastic reception it first met with, it does not merit its present obloquy. Professor Koch has made a most important discovery, and when the details as regards dosage have been thoroughly worked out, and conclusions have been arrived at as to the best kind of remedies, constitutional and local, to combine with it, tuberculin will prove a most valuable addition to the curative agencies in the hands of the physician.

FIRST REPORT OF CASES TREATED BY TUBERCULIN.

(A second and more detailed report will be published at the termination of twelve months after the last patient was injected.)

IN the cases reported below, neither the name, the sex, nor the exact age has been given, the decennium in which the age occurs being alone stated. It is thought that these reports may fall into the hands of some of the patients treated, and that they might have a depressing effect if they were able to identify their own cases.

(A) Thirty to forty years. PULMONARY PHTHISIS. Condition on admission : Fine crepitation at middle third of left lung. Six weeks under treatment. Bacilli present. Number of injections, 9 ; max. dose, '01 c.c. ; max. temp., 103'4 ; max. pulse, 105 ; max. resp., 40. General remarks : Injections always followed after twelve hours by increased moist sounds, lasting from thirty-six to forty-eight hours. On one occasion, three and a half hours after an injection, severe dyspnœa with a very frequent hacking cough came on ; very little air appeared to enter the chest, and the face, lips and nails became blue, but after a short time the spasm of the bronchial tubes gave way, and sibilant râles were heard all over the chest. These cleared up after a few hours. Condition on discharge : Moist sounds could not be heard ; cough and expectoration diminished. In the early part of treatment patient lost 7lbs., but regained it before leaving hospital, and a fortnight after discharge had gained 14lbs.

(B) Twenty to thirty years. PULMONARY PHTHISIS. Condition on admission : Slight consolidation at both apices, most marked on the right side. Five weeks under treatment ; bacilli abundant. No. of injections, 12 ; max. dose, '08 c.c. ; max. temp., 103'6 ; max. pulse, 122 ; max. resp., 26. General remarks : After each injection increase of moist sounds, which became dry on second or third day following. Condition on discharge : Less consolidation over left apex, but slight increase on right side ; the cough and expectoration less ; gained 11lb. whilst in hospital.

(C) Thirty to forty years. PULMONARY AND LARYNGEAL PHTHISIS. Condition on admission : At right apex dry sounds, at left apex softening ; epiglottis thickened and pale ; ventricular bands and inter-arytenoid fold thickened. Ten weeks under treatment ; bacilli in large quantities. No. of injections, 15 ; max. dose, '015 c.c. ; max. temp., 103 ; max. pulse, 100 ; max. resp., 18. General remarks : After the first injection the pale and slightly swollen right arytenoid cartilage assumed a pyriform shape, and became of a redder colour ; in fact, presented the appearance of laryngeal phthisis. The rest of the larynx subsequently became much inflamed, without, however, being distinctly œdematous. Condition on discharge : Epiglottis slightly swollen and very red ; ventricular bands and arytenoid red, swollen, and at parts superficially ulcerated. The softening has extended over the upper part of the left lung ; right lung in same condition as on admission ; increase of cough and expectoration.

(D) Twenty to thirty years. LARYNGEAL AND PULMONARY PHTHISIS.

Condition on admission : Harsh breathing at right apex, consolidation at left ; both arytenoids pale, both ventricular bands red, swollen, and covering the cords ; right ary-epiglottic fold slightly swollen, and left fold much swollen.

Eight weeks under treatment ; bacilli present. No. of injections, 17 ; max. dose, '015 c.c. ; max. temp., 104'4 ; max. pulse, 150 ; max. resp., 32. Condition on discharge : Cavity at right apex, softening at left ; moist sounds over the whole of the chest ; much swelling and redness of epiglottis ; both ary-epiglottic folds presenting pyriform swellings ; ulceration of left ventricular band. Pain in swallowing. Evening temperature between days of injections 100-101. While in hospital lost 2lbs.

(E) Forty to fifty years. LARYNGEAL AND PULMONARY PHTHISIS. Condition on admission : Moist sounds at both apices ; slight swelling of ary-epiglottic folds ; slight superficial ulceration of inter-arytenoid fold ; left ventricular band presents a flap-like thickening from its anterior half, which covers the anterior half of the left vocal cord : the right ventricular band and right vocal cord normal. Four weeks under treatment ; bacilli numerous. No. of injections, 26 ; max. dose, '025 c.c. ; max. temp., 104'5 ; max. pulse, 104 ; max. resp., 20. General remarks : As a rule the constitutional reaction was very slight, the temperature seldom rising above 100 or 100'5. On the only occasion when the temperature rose high (104), more than twenty injections had already been made, and the strength of the dose was only '015 c.c. Shortly after the injecting process had commenced, œdematous swelling of a markedly inflammatory character took place in the right ary-epiglottic fold. This diminished slightly in the intervals between the injections, but increased again after each injection. The swelling, which was as large as a pigeon's egg, took place principally towards the lateral wall of the pharynx, and did not diminish the calibre of the laryngeal canal, but it caused slight odynphagia. Condition on discharge : Crepitation at both apices ; œdematous swelling of right ary-epiglottic fold ; ulcer on anterior half of left ventricular band (slough of projection previously in this situation). Patient lost 7lbs. whilst under treatment.

(F) Twenty to thirty years. LARYNGEAL AND PULMONARY PHTHISIS. Condition on admission : Cavity at left apex, consolidation at right ; epiglottis much swollen, arytenoids pale and swollen, ary-epiglottic folds pale and flabby, ventricular bands imperfectly seen. Four weeks under treatment ; bacilli present. No. of injections, 6 ; max. dose, '005 c.c. ; max. temp., 105'5° ; max. pulse, 120 ; max. resp., 28. General remarks : On one occasion after an injection the patient's temperature remained at 105 for seven hours. As the treatment was evidently doing no good, but apparently causing the lung to break down more quickly, the patient was discharged from the hospital on the 29th December, 1890, the last injection having been made on the 23rd December. Patient died at home 8th February, 1891. *Post-mortem* not allowed. Condition on discharge : Large cavity at left apex increased in size, softening at right apex ; epiglottis much more swollen.

(G) Thirty to forty years. LARYNGEAL AND PULMONARY PHTHISIS. Condition on admission : Cavity at right apex, consolidation at left ;

epiglottis red, swollen and roughened; both arytenoids, especially the left, pale and swollen; inter-arytenoid fold thickened and ulcerated; ary-epiglottic fold and ventricular bands swollen and pale, completely covering cords. Two weeks under treatment; bacilli in large quantities. No. of injections, 13; max. dose, '03 c.c.; max. temp., 105'2; max. pulse, 160; max. resp., 32. General remarks: No benefit resulting from treatment, the patient was discharged from the hospital on 16th December, 1890, receiving the last injection on 12th December, 1890; died January 22nd, 1891. No *post-mortem* allowed. Condition on discharge: Increase of cavity at right apex; left apex same as when admitted. Larynx much swollen in all parts; ventricular bands and inter-arytenoid folds ulcerated.

(H) Forty to fifty years. LARYNGEAL AND PULMONARY PHTHISIS. Condition on admission: Dulness at left apex; both ventricular bands and arytenoids swollen and red; inter-arytenoid fold pale, swollen and projecting forward. Vocal cords covered by ventricular bands. In addition to physical signs, there is a history of specific disease. Considerable pain in left side of neck, shooting up to ear, on same side. Three weeks under treatment; bacilli present. No. of injections, 4; max. dose, '06 c.c.; max. temp., 101'8; max. pulse, 120; max. resp., 28. General remarks: Crepitation occurred at left apex, about twenty-four hours after the first injection. No change at apex after last two injections. Very slight local reaction followed injection. Condition on discharge: Area of dulness at right apex diminished; no marked change in condition of larynx.

(I) Twenty to thirty years. LARYNGEAL AND PULMONARY PHTHISIS. Condition on admission: Deposit at both apices; arytenoids enlarged, red, and roughened; ary-epiglottic folds and ventricular bands swollen; vocal cords slightly thickened and ulcerated. Five weeks under treatment, but still in hospital; bacilli abundant. No. of injections, 18; max. injection, '09 c.c.; max. temp., 101'2; max. pulse, 108; max. resp., 20. General remarks: Symptoms following injections only slight. Condition on discharge (still in hospital, but injections have ceased for a week or two): No crepitation on left side, doubtful crepitation occasionally present on the right side. Ulcers on vocal cords healed, but they are still slightly thickened, and general appearance of the larynx nearly healthy; the arytenoids being only slightly swollen, and of a healthy colour.

(J) Ten to twenty years. PRIMARY LUPUS OF THE LARYNX. Condition on admission: Epiglottis almost completely destroyed; both arytenoids and epiglottic folds so swollen as to completely obstruct the larynx. The breathing had become so difficult, that six months previous to admission into the hospital, tracheotomy was resorted to. Sixteen weeks under treatment, but still in hospital. No. of injections, 27; max. dose, '10 c.c.; max. temp. 105; max. pulse, 160; max. resp., 20. General remarks: In the earlier stages of treatment, local reaction followed each injection, the arytenoids becoming much swollen, the little space between them being obliterated. After thirty-six or forty-eight hours the inflammation subsided, and the arytenoids were less swollen than before the injection. The injections were followed once by sickness, and on two occasions by colicky pain. Subsequently 5 minims of Tinct. Opii. were administered before each injection, and no inconvenience was

experienced. Present condition, March 20th: The arytenoids and ary-epiglottic folds are still much swollen, but a good supply of air passes into the larynx, so that the patient, who was aphonic on admission, can now speak in a loud but rather hoarse voice. Before leaving the hospital no reaction followed after the injection of a decigramme. Patient since re-admitted. After several further injections, and reaching a maximum of '10 c.c., the orifice of the larynx was so well opened that the patient now breathes with a cork in the canula.

(K) Ten to twenty years. LUPUS OF THE LARYNX AND NOSE. Condition on admission: Primary lupus of the larynx, epiglottis swollen, rigid and granular, and has a red nodule at the free edge on each side. Both arytenoids are thickened, especially the right one; right ventricular band is swollen, and both vocal cords slightly thickened; the right one presented a nodule on its free edge, near the centre. A secondary lupus of the nose and lip, gums and hard palate, involving bridge, both alæ, both sides of the septum, the upper lip, anterior surface of the gums and front of the mouth, posterior surface of gums and hard palate. Sixteen weeks under treatment; still in hospital. No. of injections, 23; max. dose, '10 c.c.; max. temp., 104°0; max. pulse, 140; max. resp., 44. General remarks: After earlier injections the urine contained a slight trace of albumen. On two occasions slight colic followed injections. After earlier injections there was some discomfort in swallowing owing to swelling of the lips, palate and epiglottis. Present condition (March 20th): The patient's nose cured, with the exception of slight redness just below the bridge; lips slightly swollen, gums and palate cured. Epiglottis and larynx cured, with the exception of slight swelling on the centre of the right vocal cord, and very slight swellings on the edge of the epiglottis in the localities where there had previously been nodules. Patient retained in hospital until he is admitted into a convalescent institution. *Postscript.*—April 1. Relapse has taken place, affecting gums, palate, and nose.

(L) Forty to fifty years. LUPUS OF NOSE. Condition on admission: The right half of the framework of the nose is destroyed, the turbinated bone being exposed, and covered with vegetation. The malar extremity of the ulcer is much thickened, and presents a number of lupoid nodules. The anterior surface of the nose is ulcerated. There is also an isolated nodule close to the inner canthus of the right eye. The ulcer has extended from the nose downwards, and has nearly reached the red part of the lip on the right side. Eight weeks under treatment. No. of injections, 28; max. dose, '10 c.c.; max. temp., 104°4; max. pulse, 105; max. resp., 22. Present condition (March 20th): Thickening on malar edge of ulcer almost disappeared; deposit at inner canthus still visible, though much smaller; thickening over turbinated body diminished. This patient was discharged temporarily from the hospital on February 7th, scarcely any reaction following the injection of '10 c.c. of tuberculin. Re-admitted on the 13th, and '002 c.c. was injected into the substance of the turbinated body. This was followed by marked local reaction, and some slight general reaction. The second injection on the 17th was followed by a rise in temperature of 102°. The great effect of these injections of weak strength into the seat of the disease, after the injection

of 10 c.c. into the back had produced no rise of temperature or local change, is remarkable. Some observers thought that the ulceration had extended slightly across the bridge of the nose since the treatment had commenced, but this was strenuously denied by the patient himself. The patient lost 14lbs. in the early part of the treatment, but subsequently recovered all the loss, and gained 3lbs.

(M) Twenty to thirty years. LUPUS OF NOSE, UPPER LIP, AND RIGHT SIDE OF FACE. Condition on admission: Lupus erythem. of right cheek, lupus vulg. of lip and nose. Twelve weeks under treatment, but still in hospital. No. of injections, 24; max. dose, 10 c.c.; max. temp., 105.5; max. pulse, 172; max. resp., 44. General remarks: Patient stated that she had been cauterised and scraped upon various occasions, altogether thirty-two times; but she affirmed that she was better after the second injection than she had ever been before. In the earlier stage the injections were followed by an extensive roseolous rash, which after a few days became of a purple colour, and afterwards faded away. Present condition (March 20th): The patient is nearly cured, and very slight reaction now takes place after a dose.

(N) Forty to fifty years. LUPUS OVER THE WHOLE OF NOSE, UPPER LIP, AND PART OF BOTH CHEEKS. PULMONARY PHTHISIS. Condition on admission: Lupus vulg., but in parts almost erysipelatous; limited crepitation at the apices of both lungs. Fourteen weeks under treatment, but still in hospital. No. of injections, 19; max. dose, 0.45 c.c.; max. temp., 104.2; max. pulse, 106; max. resp., 22. General remarks: In addition to the disease already described, the examination of the pharynx shows extensive cicatricial contractions, the uvula being destroyed and the back of the palate adhering to the posterior wall of the pharynx. Present condition (March 20th): Condition of face very much improved.

(O) Forty to fifty years. LUPUS OF FOREHEAD, EYELIDS, NOSE, CHEEKS AND NECK. Condition on admission: Disease is active in all situations except on the neck, where it has undergone cicatrization. Six weeks under treatment, but still in hospital. No. of injections, 18; max. dose, 0.45 c.c.; max. temp., 102.6; max. pulse, 136; max. resp., 32. General remarks: Reaction always took place very rapidly after injection; the eyes became closed and large scabs formed over the inflamed parts, rash followed injection. Present condition (March 20th): General condition of face very much improved.

(P) Ten to twenty years. LUPUS OF NOSE, LIPS, HARD PALATE, FAUCES AND LARYNX. Condition on admission: Epiglottis slightly thickened, centre of free edge eaten away, but cicatrized; vocal cords slightly thickened, both arytenoids and ventricular bands slightly swollen and rough. No active disease going on in the larynx, but a little mucus hanging about the parts, and adhering in places—the appearance of the mucous membrane in fact resembling that seen in the naso-pharynx in cases of long-standing catarrh. Lupoid process involves mucous membrane and right ala of nose. Six weeks under treatment, but still in hospital. No. of injections, 15; max. dose, 0.3 c.c.; max. temp., 104; max. pulse, 136; max. resp., 32. General remarks: Injections followed by great swelling of the nose, completely obstructing both nasal passages. The

patient, on one occasion, had a severe attack of spasm of the glottis, almost necessitating tracheotomy. It is believed to have been caused, or at any rate aggravated, by the adhesion of dry mucus to the vocal cords. Present condition (March 20th) : Condition of nose much improved.

(Q) Twenty to thirty years. TUMOUR OF NECK. Injected for diagnostic purposes—in fact, to ascertain whether the disease was malignant or scrofulous. Two injections were made, max. dose, '01 c.c., but no effect either local or general was produced. The case was considered to be one of lympho-sarcoma. Fourteen days under treatment.

(R) Twenty to thirty years. SUPPOSED PULMONARY AND LARYNGEAL PHTHISIS. Injected for diagnostic purposes. Condition on admission : Crepitation at both apices ; nine days under treatment ; no bacilli found. Two injections. Max. dose, '005 c.c. ; max. temp., 99·8° ; max. pulse, 96 ; max. resp., 16. General remarks—Condition on discharge : No change as regards either the lungs or the larynx. Seen three months afterwards, no crepitation could be discovered in the lungs, but there was still slight thickening of the inter-arytenoid fold. It is very doubtful whether the disease in this case is tubercular or not. There is a strong family history of phthisis, father and mother and a brother and sister having died of phthisis, but the reaction from injections was less than it has been in any case of phthisis in this series.

(S) Twenty to thirty years. SUPPOSED PULMONARY AND LARYNGEAL PHTHISIS. Injected for diagnosis. Two weeks under treatment ; no bacilli found. Condition on admission : Slight crepitation at both apices ; congestion of the larynx, especially on the right side. Three injections : max. dose, '003 c.c. ; max. temp., 102·8 ; max. pulse, 138 ; max. resp., 28. General remarks : Moist sounds spread after injections, but the congestion of the larynx disappeared. The injection fully established the tubercular nature of the pulmonary affection.

(T) Twenty to thirty years. SUPPOSED PULMONARY PHTHISIS. Injected for diagnostic purposes. Two weeks under treatment ; no bacilli found. Condition on admission : Slight crepitation at apex of left lung ; marked dulness at right apex. Had lost 7lbs. during the last six months. Belonged to a family in which there was a strong phthisical tendency, four out of seven children (of whom patient was one) having died of consumption. Three injections : max. dose, '005 c.c. ; max. temp., 98·4 ; max. pulse, 68 ; max. resp., 15. General remarks : The absence of reaction tends to show that the disease is catarrhal and not tubercular.

DEVIATIONS OF THE NASAL SEPTUM.

By Dr. JOHN SEDZIAK, of Warsaw.

(Continued from p. 95.)

THE *symptoms* of the deviations of the nasal septum are exceedingly various, and depend especially on the degree of these deviations. In cases insignificant and uncomplicated (the most frequent, as we have already shown) symptoms are entirely absent, so that we only occasionally observe these deviations. Out of my 200 cases, in 92, *i.e.*, almost in half, there were no symptoms referred to the nose, but to other organs (throat and ear). It is, however, more astonishing that in five out of fifteen cases, where these deviations were very greatly developed, the patients did not complain of the nose. It shows how careful we must be in estimating the value of this pathological process, and especially in the indications for its surgical treatment. In cases of deviation, though insignificant but complicated, symptoms may arise from these complications, *i.e.*, hypertrophies of the turbinated bodies (out of my 200 cases in 80), rarely post-nasal growths (out of 200—12 cases), and polypi (out of 200 cases in 5). The complications of deviations with hypertrophied turbinated bones are mentioned by different authors (Bryson Delavan, Jarvis). Gleitsmann maintains that hypertrophy of the middle turbinated is most frequent, with which I do not agree.

In cases of moderate or more considerable deflections of the septum, the nasal cavity corresponding with the convexity of the septum is more or less narrowed (stenosed). Although rarely, it may also entirely obstruct the "lumen" of the corresponding nasal cavity, touching the exterior nasal wall, *e.g.*, the turbinated bodies, with the convex part of the septum. Sometimes it happens that the nose externally is more or less inclined towards one side (according to Zuckerkandl), in case of deviation of the septum osseum, *i.e.*, its anterior part also deviates with the septum cartilagosum. The symptoms of deviations of the septum may be divided into two principal groups : (1) those caused by the obstruction of the nose (mechanical) ; (2) those resulting from the pressure upon the nerves—*i.e.*, reflex.

As to the former we may decidedly state that deviation of the nasal septum is one of the most frequent causes of catarrhs of the nose and naso-pharynx, with all their consequences. It is to be understood that I speak here of a considerable degree of this pathological condition. Thus, in the corresponding nasal cavity, behind the place narrowed, as a result of deflection or spur of the nasal septum, the atmospheric pressure is more or less diminished ; congestion and swelling of the mucous membrane, especially of the parts covering the turbinated bodies, appear, and chronic hypertrophies of these latter ensue. In cases of a very extreme degree of deviation of the septum the above described symptoms occur, not only in the narrow nasal cavity, but also in the opposite (dilated) one, which receives the whole quantity of the air designed for both cavities. As a consequence of the obstructed breathing through the

nose must be mentioned the whole series of symptoms, as breathing with the open mouth (day and night), occasioning the highly disagreeable sensation of perpetual dryness in the throat, caused by atrophic changes of the mucous membrane and its glandular elements—in other words, the form of disease which is known under the term “pharyngitis sicca.” Sometimes, however, the glandular elements, under the influence of irritation, begin to hypertrophy, and then we have to do with the so-called “pharyngitis granulosa seu follicularis.” Sometimes, besides the sensation of dryness, snoring and disturbed sleep, etc., appear. Further, on account of the catarrhal state of the nasal mucous membrane, the secretion begins to be more abundant; its removal *per vias naturales*, i.e., the anterior openings of the nose, is more or less obstructed on account of stenosis, due to deflection of the septum. The secretion is retained, accumulates behind the narrow place, there dries, gets sticky, changes colour (dirty-greyish), crusts are formed and decompose, causing fœtor—in one word, we have to do with a whole series of atrophic changes of the nasal mucous membrane, known by the term “rhinitis atrophicans” (ozæna).

More remote changes we find in disease of the mucous membrane of the larynx, which also becomes subject to chronic catarrh on account of irritation by the air, deprived of its usual humidity and purity, which it should receive in passing through the nasal cavities. As to other symptoms, bleeding of the nose (epistaxis) but seldom results from deviation of the septum. It is generally caused by injury to the soft parts of the nose (mostly the turbinated bodies), especially in cases of spurs (spinæ and “Spinöse leisten”), touching with their sharp edges the corresponding parts (Mackenzie). Anosmia also may be the indirect consequence of this process, as Parker’s case proves. It may happen in this manner, that in cases of great deviation the odorous particles cannot penetrate the “regio olfactoria.” Deviation of the septum sometimes obstructs the performance of certain operations upon the nose (polypi, turbinated bones), and even in certain cases renders examination, such as introduction of the nasal speculum, difficult. Finally, deviation of the septum may unfavourably influence the state of the ears in two ways—(1) By producing nasal catarrh and spread of the process to the Eustachian tube, or middle ear; (2) preventing suitable treatment (catheterism) of existing pathological processes in the ear. Mackenzie and Lennox Browne maintain that deviations of the nasal septum have a bad effect on the voice.

In the second group of symptoms due to deviations of the septum, we must include the whole series of so-called “reflex phenomena.” Baratoux and Heryng have even supposed that there is a separate “zona reflectoria” on the posterior part of the septum. Touching this region by means of a probe, they produced these phenomena (cough, sneezing, etc.). At present, however, B. Fraenkel’s opinion is generally accepted, i.e., that reflex may appear in every region of the nose. As reflex phenomena we must include sneezing (Natier’s case), cough, sense of suffocation (Wood), asthmatic attacks (Heymann), lachrymation, spasm of the eyes, pain at the base of the nose, and frontal pain. An interesting case is reported by Bartnal. After galvano-caustic operation for deviation of the septum,

boring pains in the cartilaginous part of the septum, which were constantly present while eating and speaking, disappeared. Pains in the region of the facial and trigeminal nerves are seldom the result of these deviations. Heymann mentions paræsthesia pharyngis as a result of this disorder. Lasting sleeplessness in Creswell Baber's case ceased after a radical cure of deviation of the septum. Here also, to a certain degree, we may include an interesting case of Schech's, of secretory angio-motor neurosis. A young man, after a fall on the nose, exhibited, strangely, during every rise of temperature, abundant perspiration at the point of the nose, so that the sweat dropped down profusely, and even slight rubbing of the tip of the nose produced an abundant bleeding. Objectively there was found the deviation, as well as great vascularity of the cartilaginous part of the nasal septum.

The *diagnosis* of deviation of the nasal septum cannot give rise, I think, to any difficulty. Fortunately the time is past when deviations of cristæ septi can be taken for growths (polypi), as Velpeau and Zuckerkandl mention, and even as such were operated upon (*vide* Voltolini).

The *prognosis* is mostly favourable. When we have only comparative certainty that the symptoms arise either indirectly from the deviations of the septum, or reflex phenomena really depend on these changes—the rational (surgical) treatment mostly removes them for good.

The *treatment* of deviations of the nasal septum may be divided into two groups—(1) Palliative, having as aim the removal of the consequences, *i.e.*, chronic nasal catarrh, etc.

2. Radical, *i.e.*, the removal of the deviations. This latter may be (a) orthopædic, such as the straightening of the nasal septum by means of special instruments; (b) operative, having for aim the surgical removal of these deviations. The passage from orthopædic to the operative (sanguinary) treatment is found in (1) galvano-caustic treatment, and (2) electrolysis.

Upon the palliative treatment I shall not dwell. It is to be understood that in cases of deviations of the septum, complicated by great hypertrophies of the turbinated bodies, or polypi, or post-nasal growths, these diseases must first be treated.

I pass now to the radical treatment of the deviation of the nasal septum.

First, however, I would remark that some authors, in my opinion, attach too much importance to these deviations, and therefore, perhaps, too often take refuge in radical treatment. I endeavoured to show, at the commencement of this work, that this pathological process is exceedingly frequent; that we can, to a certain degree, look upon an asymmetrical septum as a rule—symmetrical, however, as an exception. Further, that probably deviatio septi of a greater or lesser degree already exists from infancy. This frequency, however, is not in direct relation with the functional troubles which are the consequences of this disorder. On the contrary, patients comparatively seldom complain of these troubles, so that deviatio septi sometimes, even when very considerable, is discovered only accidentally. It is, then, a question of great importance whether in cases of great deviation, but without any distinct symptoms, we should treat them or not? In my opinion, not, and in general in these cases we must

not be guided by the degree of the pathological process, but by the kind and degree of the symptoms which this system produces. It may, therefore, sometimes happen that we ought radically to treat this disorder in cases where deviation of the septum is very slight, and *vice versâ*. Very distinct indications are therefore necessary, to which some authors (Knight, Moure, Hartmann, etc.) have already drawn attention. The first and most important indications for radical treatment of the deviations of the septum are—

1. Respiratory troubles. It will not be difficult to understand for what reason I give the first place to this indication. In estimating these troubles we must be very careful. We must, as much as possible, have an absolute assurance that these symptoms depend on this disorder, *i.e.*, deviation of the septum—that they do not depend, for instance, upon the existence of growths in the naso-pharynx. In these conditions the cure of the deviation certainly does not remove these troubles. We should be guilty of vainly subjecting the patient to a painful operation.

The second, not less important, indication for radical treatment of deviation of the nasal septum is the chain of symptoms known under the term “reflex.” Among these, as I have above detailed, are cough, “asthmatic” attacks, different neuralgias, etc. I said not less important, because these symptoms, mostly lasting for whole years and greatly troubling the patient, do not submit to any symptomatic treatment, and only radical treatment, *viz.*, the removal of the deviation, leads to improvement. We must, however, act with certain precautions—the more so if we are dealing with symptoms of the second order. Indeed, since the time of Hack—that fanatical propagator of the reflex theory—we have very much changed our opinions. More and more frequently are voices raised against this theory. Not always do asthma, neuralgia, etc., evidently having their origin in deviation of the septum, cease after the removal of these latter. Moreover, there are records of such a nature that they show that, after some operation in the nose, these troubles (asthma, etc.) even appear *de novo*. Before starting with the treatment of these reflex phenomena by the removal of the deviations, we must not pronounce an absolutely favourable prognosis, if we do not want to discredit ourselves to the patients.

Among the less important indications are the following :—

3. Aural troubles resulting from deviations of the septum, and causing obstruction to the treatment of existing disease of the ear (catheterization), etc.

4. An indication very seldom observed, namely, a prominent projection (*spina* or *crista*), or considerable deflection of the septum, causing a difficulty, or even entirely obstructing the introduction of instruments (*snare*, etc.) for operations for nasal polypi; also seldom are we able to complete the last.

5. *An æsthetic indication.*—Traumatism may produce not only simple deviation of the septum, but asymmetry of the nose, more or less distinctly marked. Comparatively often it is only from an æsthetic point of view that resection of the septum cartilagosum is employed in these cases, when the free edge of the cartilago-quadrangularis is not found on the

same level with the septum membranaceum, but appears to be more or less in the lumen of the corresponding nasal cavity. In these cases, besides disturbed nasal permeability, there exists a more or less distinct disfiguration of the nose, which obliges the patients to seek the aid of the surgeon.

I pass now to the operation itself, and first consider orthopædic methods. Quelmalz, in the eighteenth century, advised continuous pressure upon the tip of the nose with the finger, towards the side opposite to the deviation. A hundred years afterwards this method found an adherent in Michel. This method, however, is too simple to produce any effect. We cannot expect too much benefit from the use of laminaria bougies of different kinds (Mackenzie employs oblong, G. Stoker concavo-convex), cotton tampons introduced to the stenosed cavity for some hours or the whole day (Jurasz, Hubert), compressed air (Massei, Boucher). All these methods can only be applied with some benefit in quite recent cases of traumatic origin, in deviations of the cartilaginous part of the septum, and especially in children. In deviations of the osseous part of the septum, in adults, these methods can only have secondary significance, namely, after the cutting operations, in order to maintain the desired position of the septum. A great forward step in the orthopædic *technique* is an instrument of Adams-Jurasz. It has many admirers (Rosenthal), although not failing opponents (Stoker, Krieg, etc.).

In the year 1875, Adams constructed forceps for the straightening of the cartilaginous part of the septum. Jurasz, professor of laryngology in Heidelberg, in 1882 improved this instrument, so that the spoons—immovable in Adams' forceps—can be drawn out by pressing a specially constructed spring. They are joined by means of a screw. The shoulders of the forceps close also like obstetric forceps. The operative *technique* is as follows: After complete anæsthesia (by cocaine) of the whole part of the cartilaginous septum (as this operation is very painful), each half of the forceps is separately introduced into the corresponding nasal cavity, so that the flat spoons, previously thoroughly covered with iodoformed vaseline, embrace the deflected septum on both sides, and the shoulders of the forceps are joined crossways in the usual manner. Then, by means of a screw, both spoons are approximated, producing a gradually increasing pressure upon the deflected septum. By afterwards pressing the spring, both shoulders of the forceps are drawn out, leaving the spoons *in situ* during one, two, or even three days, or still longer (very seldom), according to the tolerance of the patient. It is an exceedingly disagreeable and painful operation. The local reaction on the part of the septum itself must be watched. It is well to insufflate every day into both nostrils some antiseptic powder. I constantly use a mixture of iodol and cocaine, 10:1. After the removal of the spoons, which is easily done by unscrewing, we must carefully examine the nasal septum, upon which a more or less inflammatory process of the mucous membrane constantly appears. The whole surface on both sides must be abundantly insufflated with an antiseptic powder as above, which insufflations must be repeated during several days, *i.e.*, till the complete disappearance of reactive symptoms.

As to instrumental means of keeping the straightened septum in the

position forcibly obtained, Jurasz employs ivory olives of different size and thickness, which subsequently, *i.e.*, after the removal of the spoons, are introduced into the nasal cavities. I had occasion to observe carefully this method of treatment during my long stay in Heidelberg.

More or less satisfactory modifications of Adams' forceps have been introduced also by Delstanche (of Brussels), G. Hope, Cozzolino (of Naples), Elsberg, etc.

In my opinion, however, Jurasz's instrument has decided superiority over all others, and I only employ this one. I must remark my astonishment that in one of the best monographs upon deviations of the septum (G. Stoker's) I do not find Jurasz mentioned.

My own opinion as to the method of straightening the nasal septum by means of Jurasz's forceps is, that really in certain rare cases this method gives fairly satisfactory results. It is indicated in deviations of the cartilaginous part of the septum, especially in sigmoid deviations in young persons, in cases not too old, and in deviations of the septum without thickenings (*spinæ, cristæ*). Among the disadvantages of Jurasz's method are, great pain not only during the operation itself, but after it. I also consider this method unsuitable in outpatient practice, since it requires continuous observation on account of possible consequences. Further, the post-operative treatment is exceedingly tedious, and decubitus are possible. Finally, one of the most important objections, which are made for instance by Schech to this method, is the possibility of relapses of the condition. Now as to the employment of galvano-cautery and electrolysis. Some authors as M. Mackenzie and Bryson Delavan, instead of the removal of the deviated part of the septum, advise the destruction of the corresponding turbinated body, and in this manner the restoration of the permeability of the nose. G. Stoker and Schech, however, justly deprive this method of any *raison d'être*. In this I also agree. In cases, however, as very often happens (out of my 200 cases in 1880), in which besides the deviation, there is at the same time a more or less developed hypertrophy of the corresponding (mostly inferior) turbinated bone, in my opinion we ought first (on account at least of rendering operation easier) to remove the hypertrophied part of the turbinated, and preferably by the galvano-cautery, with the snare in cases of polypoid degeneration, and with the cautery, by piercing and furrowing in cases of simply hypertrophied turbinated bones. If this method of treatment is successful, as is proved by the disappearance of the symptoms, it is best to leave alone the deviations of the septum, even when considerable. But if we remove this deviation we have at least the advantage of widening the operative field, which gives us the possibility of a more precise performance of operation. Subsequent adhesions, especially after galvano-caustic operations, are also less frequent.

The galvano-cautery as a therapeutic method for deviations of the septum has many supporters, among whom are Patrzek, G. Stoker, Jurasz, Voltolini, Schaeffer, Walsham, etc. I myself am also most in favour of this method. In deviations, especially angular or partial thickenings (*spinæ, cristæ*), I preferably employ the different forms of the galvano-cautery as well as the snare for certain spurs.

Electrolysis.—This recent therapeutic method finds supporters for its application in deviations of the septum, especially in France, where it was first introduced by Miot. Garel read a paper on the subject at the meeting in Paris, 1889. Moure, of Bordeaux, also warmly supports this method. He together with Professor Bergonié, published in the "Journal of Laryngology," 1890, No. 12, a paper entitled "On Deviation and Spurs of the Nasal Septum," read also at the International Congress in Berlin, 1890. The authors have successfully applied electrolysis in many cases of deviations with or without thickenings. They employed two methods: (1) The so-called unipolar positive, and (2) bipolar galvano-puncture. The former is the following: An indifferent large electrode invented by Bergonié, is placed between the two scapulæ, and is joined by the negative pole of the battery. After examination of the septum, a steel (piercing easier) needle of 98—115 millimètres diameter, and of 8—11 centimètres length, is introduced into the centre of the deviation and joined to the positive pole. For the most part 30 milliamperes of current strength suffice. A sitting lasts 10—20 minutes. It is to be understood that a rheostat as well as a galvanometer are necessary. An excellent electrolytic apparatus is constructed by Hirschman, a well-known electrical manufacturer at Berlin, which I saw in the clinics of Prof. Krause, where Dr. Kuttner, assistant of the clinics, has for a long time been conducting careful experiments with this method.

The second method of application of electrolysis differs from the former in this manner, that an indifferent electrode is not employed, only two steel needles being inserted into the deflected part of the septum; the needle which is in the thicker part of the septum being joined to the positive, the other to the negative pole of the battery. Of course, both needles must not touch each other. The free portions of the needles must be well isolated by means of caoutchouc. The force of 20 milliamperes is entirely sufficient. As to the choice of both methods, the authors remark that in all cases where the needles are easily introduced into the deflected septum the bipolar method should be employed, and *vice versa*. The unipolar method thus forms a rarer application than the bipolar.

Although I have not used electrolysis in cases of deviations of the septum, yet, based upon my present experience as to the application of this method in cases of enlarged lymphatic glands of the neck, as well as in cases of strumata, I can say that this method is exceedingly tedious—numerous *séances* are necessary—further, it is painful, and, what is most important, does not always lead to the desired end. Moreover, it requires very dear apparatus, and is not accessible even for every specialist. I do not wish to absolutely maintain that electrolysis in cases of deviations of the nasal septum has not the value which is ascribed to it by Moure, as I have no suitable experience of it; I am, however, of opinion that the galvano-cautery attains the desired end much the quicker. I pass to the proper operation, *i.e.*, surgical treatment of deviations of the nasal septum. First, however, I will make some remarks upon the more commonly used instruments.

1. *The Knife* (simple bistoury) is mostly employed preceding operation itself; for instance, for the incision of the mucous membrane before the

resection of the cartilage, etc., or less frequently for the removal of the deflections or spurs of the septum (G. Stoker, Schech, Jurasz, etc.). In these cases it is more useful to employ a knife with a blunt or headed point in order to avoid wounding of healthy parts behind the deviation. The knife or scissors are only applicable to cases of soft cartilaginous deviations in children. I must add that, for secondary separation of the mucous membrane, we usually employ the "raspatory."

2. *The éraseur* has a supporter in Jarvis, of New York, who applied it only in cases of soft cartilages. We must not forget to make first an incision of the cartilage so as to get the snare of the *éraseur*, otherwise it may slip. In general this instrument is seldom applied.

3. Much more frequently *saws* are used, especially those of Bosworth, of New York. Among the numerous supporters of this method we may mention Casselberry, Woakes, Rosenthal, Baratoux, Ficano, Moure, etc. I also often use Bosworth's saws. I say "saws," as two kinds are necessary; one, with teeth directed upward, another downward (both situated on a handle at an obtuse angle).

In the application of saws we must observe some precaution, especially well cocaineizing the field of operation, as it is very painful. Further, we must not saw without a previous incision and separation of the mucous membrane in order not to aggravate the already painful operation, and not to produce still more abundant bleeding, and what is the most important, not to cause gangrene of the torn parts of the mucous membrane, which may appear, though rarely. Further, we must hold the saw straight, not bending it to the right or left side, and saw quickly, one half of the deviated septum from above, another from below, till both portions meet. The application in this manner of two saws has especially the advantage that we can avoid wounding of healthy parts, although I must say that some authors employ only one saw.

Preserving the above precautions, healing ensues without suppuration—the formation of secondary cicatrices. Considerable bleeding is generally absent. It may, however, occur (Walsham). Latterly (in America) electric saws begin to find their application.

4. Among the instruments which we cannot dispense with in the operative treatment of deviations we must mention *Chisels* of different size and breadth. By means of these instruments, after incision and separation of the mucous membrane, we can destroy the deflected part of the septum, especially spurs. The strength of the hand will generally suffice. Sometimes we may assist it by a slight blow from a hammer. Jurasz, Heymann, Seiler, Moure, Bresgen employ chisels for the above purpose. I also frequently use them. That the post-operative treatment must be highly antiseptic I need scarcely remark.

5. Latterly among English, and still more American, physicians, drills simple—such as are employed by dentists (dental drill)—or electric, are very much in use. The former is applied by Hovell, Hill, Lennox Browne, Bronner, etc. The electro-motor drill was first introduced for this purpose by Jarvis, of New York—Curtis, Macintyre, and Spicer use it. As I have had occasion to convince myself, this latter has a superiority over the simple dental drill, although I am not myself in favour of those

instruments in the treatment of deviations, since they always leave an uneven surface.

These are the principal instruments used in the surgical treatment of deviations of the nasal septum. Now I pass to the description of certain operations for this disorder.

Already, in the nineteenth century, Dieffenbach excised oblong pieces of cartilage from the deflected part of the septum. Other surgeons, as Chassaignac, Demarquay, and Langenbeck, operated in the same manner. Blandin, Rupprecht, and Roser used for this purpose a special instrument—the so-called “perforating forceps”—resembling punch forceps used for railway tickets. This method, however, of artificial perforation of the septum has its disadvantages (Schech, Moure), viz. : (1) the difficulty of insertion of the instrument, on account of a generally considerable stenosis of the nasal cavities ; (2) what is more important, the deviation itself, and the consequences it produces upon the body remain unchanged, since while the air penetrates into the narrowed cavity through the artificial opening, the retention of secretion continues. It is, moreover, a painful operation.

Hartman and Petersen proceed otherwise : after previous separation of the mucous membrane from the deflected part of the septum, they make excision (by means of bone scissors) of a piece of cartilage, the size of a ten-pfennig coin ; afterwards they sew up the mucous membrane and put in elastic bougies, in order to keep the septum in a suitable position. Boecker, instead of scissors, used forceps constructed by himself. The above method has certain advantages over the former, but it is also painful. Latterly, Krieg has presented a new method, viz. : resection of the cartilago-quadrangularis, together with the mucous membrane (incisio mucosæ), in the form of quadruple excision of the mucosa and cartilage, to such an extent as is necessary for the removal of the stenosis ; afterwards a tampon of wad and iodoform is inserted. This method, however, has not been received with favour, on account of its pain and the abundant bleeding met with (Schech). Jonathan Wright proceeds in the following manner : after examination of the cartilaginous septum, a round tunnel is made, by means of the electro-motor drill, in a direction from front to back on the most prominent part of the septum, right up to the mucous membrane of the opposite side, but without perforation. Afterwards an electric saw (we can also use Bosworth's simple saw) is introduced into the tunnel, and the outer segment is separated from the inner, always keeping the median line. In this manner a large piece of thickened cartilage from the convexed septum can be removed. This method, however, is too complicated to find many supporters.

Roberts makes resection of a cartilage under the mucous membrane ; perforation is then avoided. Asch, by means of special scissors (blunt end to the narrowed cavity, sharp to the widened cavity), makes a crucial incision ; afterwards, with a chisel introduced into the narrowed cavity, pressure is put upon the septum, it is straightened, and, by means of suitable instruments, kept in position. This is also a very complicated method.

Schech's method is good. He makes resection, by means of a headed knife, of the convex part of the septum in its whole thickness—*i.e.*, with perforation, which is not hurtful, and does not produce any change in the exterior form of the nose. This latter method has this advantage—of being simple. All the above described cutting methods for the treatment of deviations of the nasal septum will always, in my opinion, find difficulty in their application, since they have many disadvantages—*e.g.*, they are exceedingly painful. In these cases, simple application of cocaine does not suffice, not even sub-mucous injections; further, bleeding is always more or less abundant. The operation itself is difficult, and the post-operative treatment is tedious, lasting a long time, and not always successful; and sometimes adhesions with the corresponding turbinated bodies appear.

Hartmann's and Petersen's, and especially Schech's, method are, in my opinion, the best. I must add, moreover, that very seldom is the deviation of the septum of such a degree that it requires such a difficult operation. We must be very careful of "abuse." As to the special operative treatment of partial thickenings of the septum (*spinæ, cristæ*), I have already referred to it. The best method is to remove them by means of the galvano-cautery (Jurasz). We can also profitably apply saws (Schech) as well as chisels and bone scissors. Some authors use drills. All these methods (except galvano-cautery), however, always require previous separation of the mucous membrane. As to post-operative treatment, this is especially based upon keeping the straightened septum in position. For this purpose different means are used: as bougies, wad-tampons, ivory olives, etc. The post-operative treatment is of very great importance, and upon it the favourable result of operation particularly depends. It is to be understood that during the operation, as well as after it, we must preserve the strictest rules of antisepsis.

Now I must once more mention methods which I employ in the treatment of different deviations of the nasal septum.

First, however, I must say, that I proceed to cutting treatment only in cases of absolute necessity, *i.e.*, when there exists one of the above described indications. I do not go too far in saying that, if we have lately sinned in the want of courage in the performance of surgical procedure in rhinology, so especially latterly have we been too rash in performing operations where there is no necessity. It often thus happens, that instead of helping the patients, we injure them through our intervention. The necessity of operative treatment for deviations of the nasal septum is not so frequent as some authors pretend. As in every disease, so also in deviations it is of exceedingly great importance to establish the strictest rational indications.

My methods of treatment of this disorder are the following:—

1. In fresh cases (of a traumatic origin in *parte cartil. septi* in children) I use tampons of wool.
2. In little older cases of deviations of the cartilaginous part of the septum—especially sigmoid, I try orthopædic treatment, by means of Adams-Jurasz's instrument.
3. My favourite method is the galvano-cautery, especially in cases

of spinæ and cristæ (spurs), rarely in deflections (mostly in angular form).

4. Sometimes I also use the chisel, or Bosworth's saws, but always after the previous separation of the mucous membrane, especially in cases of spurs.

5. In cases where the septum cartilagosum deviates to one or other side, not being on the same plane as the septum membranaceum (the above described form), and sometimes disfiguring the nose, or at least producing respiratory troubles, I use Jurasz's method. I dissect the mucous membrane on the prominence of the septum—separate it from the cartilage, and by means of the headed knife (or scissors) make resection of the projecting part of the cartilage. After sewing up (or not) the mucous membrane, I put in a tampon of iodoform or sublimate wool. Healing usually quickly follows by first intention. This method, as I have already mentioned, is often applied only from æsthetic considerations. I have presented in general terms the methods which I use in the treatment of the deviations of the nasal septum. Intentionally I do not enter into minute casuistics of the cases observed and operated upon by me, in order not to enlarge this already too extensive paper.¹

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¹ In order to avoid misunderstanding, I beg those authors, whose opinions I have perhaps not presented properly, to draw my attention to any mistakes, for which I shall be greatly obliged, and will with pleasure make corrections.

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LARYNGEAL AFFECTIONS TREATED BY KOCH'S METHOD.

FLATAU¹ (Berlin) relates six cases observed in Dr. Oppenheim's sanatorium. (1) Young teacher with tubercle of the lungs; laryngoscopically there seemed to be only catarrh. After three injections, followed by strong reaction, there were swelling of inter-arytenoid fold and sub-glottic membrane, and infiltration of the left vocal band. Twelve days later *status idem*. (2) A lady with tubercle of the lungs had swelling and infiltration of the left vocal band. After some injections there were strong local reaction and swelling of the posterior wall. Some days later the patient seemed to be cured *quoad laryngem*. (3) A patient thirty years old had tubercular infiltration of the left vocal band and deep

¹ "Berliner Klin. Woch." 1891, No. 3.

ulceration of the left ventricular band. After three injections, some prominence of the affected local band. Twenty days later great improvement in the local condition. (4) Young lady with tubercle of the lungs curetted because of a tuberculous infiltration of the posterior wall, now has only a cicatrix. After some injections, swelling of the left vocal band and the ary-epiglottic fold; inflammation of the soft palate and tonsil, development of little tumours in the tonsil; the next day ulceration of these tumours, containing tubercle bacilli. (5) A patient whose tuberculosis of the vocal band was treated by cutting forceps, followed by application of lactic acid, had now recurrence. After the first injections his state was worse, but some time later improved. (6) This patient was laryngoscopically observed after having been treated by eight injections. The posterior wall was irregular and covered with secretion. The author concludes that the treatment will be of good use in laryngeal phthisis, if it is applied under laryngoscopic observation and with great precaution.

SCHNITZLER¹ shows two cases of laryngeal phthisis treated by Koch's method. (1) A man, thirty-eight years old, with tubercle of the lungs, infiltration and ulceration of the inter-arytenoid mucous membrane. No general reaction after the injections, but local improvement. Some days later the state of the larynx deteriorated very much. The epiglottis, hitherto normal, became œdematous, and showed a great number of miliary tubercles. Some days later miliary tubercles appeared on the posterior pharyngeal wall. There were tubercle-conglomerations of the size of a nut in the pharynx and difficulty in swallowing. Now the patient is in a feverish state. (2) A patient, twenty-seven years old, with tubercle of the lungs. In this case swelling of the inter-arytenoid mucous membrane disappeared, the ulcers cicatrized; the arytenoid cartilage, previously immobile, now became free, improvement of voice ensued, but the state of the lung deteriorated.

SCHREIBER (Königsberg)² has treated seventy-six cases. He reports on four cases of laryngeal tuberculosis. In one of them an infiltration of the inter-arytenoid mucous membrane disappeared after thirty-nine days of treatment. The state of the lungs also was improved. In three other cases it cannot yet be said with surety whether the state of the disease is improved for a long time.

GUTTMANN and EHRLICH (Berlin)³ recommend beginning the treatment with a decimilligram, adding daily a decimilligram more, especially in cases of laryngeal tuberculosis. If the treatment is so managed, there is not such high feverish reaction, and the patients do not lose so much in weight. Also during the application of such small doses local reaction and improvement are observed in many cases.

IRSAY (Buda-Pesth)⁴ has treated seventeen cases, of which the majority had also affections of the larynx. (1) A patient, forty-five years old, with tubercle of the lungs; ulcers of both vocal hands. After eight injections improvement of the voice and cleansing of the ulcers. (2)

¹ Wiener Med. Doctoren Collegium, Meeting, Jan. 26, 1891.

² Verein für Wissenschaftliche Heilkunde in Königsberg, Meeting, Jan. 19, 1891.

³ "Deutsche Med., Woch." 1891, No. 10.

⁴ "Internat. Klin. Rundschau," 1891, Nos. 5-7, and "Deutsche Med. Woch." 1891, No. 6.

Another, forty-three years old, with tubercle of the lungs ; ulceration of both vocal bands and the inter-arytenoid space. Cleansing of the ulcers, and diminution of the swelling. (3) A patient, twenty-six years old, with tubercle of the lungs ; the larynx had not been affected before the treatment. After the sixth injection ulcers arose on the right vocal band and processus vocalis. (4) A patient, with lupus of the face, was not examined before the beginning of the treatment. Dyspnœa came on during the reaction. The laryngoscope showed that there was lupus of the epiglottis, now very much swollen, and nearly closing the entrance of the larynx.

GRABOWER (Berlin)⁵. The outbreak of grey miliary nodules is viewed by many authors as a dangerous symptom, and contra-indicating Koch's treatment. The author does not agree with this view. He has also seen such neoplasms in previously healthy organs, but he does not believe that they mean any particular harm to the patient. In one case of tubercle of the lung there came on, after twenty-four injections, hoarseness, followed by aphonia and difficulty in swallowing. The laryngoscope showed a large number of miliary nodules on the left ventricular band and the arytenoid cartilages. Some days later the nodules disappeared, and did not again appear. In a second case, a patient forty-two years old affected with pulmonary tuberculosis, complained, after sixteen injections, of pains in the neck and hoarseness. The free edge of the epiglottis was covered with little nodules, and the organ was much swollen. The nodules disappeared soon, but the swelling persisted for a longer time.

A. FRAENKEL⁶ reports a case of lupus of the soft palate, larynx and pharynx, combined with tuberculosis of the uro-genital organs ; the lungs were intact. In this last case injections of 0·0005 were made, with the result that the swelling in the larynx diminished, so that now the whole larynx could be seen with the laryngoscope, which previously was quite impossible.

FLATAU⁶ has observed, during the treatment, the development of a recent tonsillar tuberculosis, and in a second case an acute tuberculous laryngitis, which had no tendency to improvement.

VIRCHOW⁷ showed specimens of a case treated by thirty-six injections. In the larynx was a fresh ulcer on the posterior end of the left vocal band. Around the larynx and the trachea was a colossal mass of swollen caseous glands. The greater number of the lesions were so recent that they must certainly have arisen during the treatment.

Michael.

⁵ Berliner Med. Gesellschaft, Meeting, Feb. 4, 1891.

⁶ Berliner Med. Gesellschaft, Meeting, Feb. 11, 1861. ⁷ *Ibid.*, Feb. 16, 1891.

LIEBREICH'S TREATMENT OF LARYNGEAL PHTHISIS.

THE views concerning Koch's treatment with the now so-called "tuberculin" are not yet decided, and we have already reports of a new method. Already, for some weeks, it was known that a new method of treatment of laryngeal phthisis had been discovered by Liebreich, and, therefore, his communications fixed for the meeting of the Berliner Medicinische Gesellschaft, on the 25th February, were expected with the greatest interest.

LIEBREICH began his paper with the description of the pharmacodynamical effect of the medicaments. He stated that cantharides had a very strong effect, but had not yet been adapted for internal or subcutaneous use because of the inconstant composition of the preparations; how he has extracted the alkaloid of cantharides, and prepared from it a new medicament called "cantharidinate of soda or potash." The full effective dose which can be applied without damage is 0.0002 to 0.0004 (2—4 decimilligrams). The medicament is applied as subcutaneous injections in the back. Experiments have been made by B. Fraenkel, P. Heymann and Landgraf.

P. HEYMANN has applied the new medicament in twenty-seven cases in his polyclinic. On ten cases he cannot yet report because the time of treatment is so short. Of seventeen cases, eleven were tuberculous affections, and six chronic catarrhs of the larynx. All are out-patients, and their usual life was not changed; the smokers have continued to smoke. In some cases strangury is observed, in one hæmaturia, but in no case dangerous symptoms. In all cases there was marked tuberculosis of the lungs and larynx. They had all been hoarse, some of them totally aphonic. In a few days after the injection, in the majority, the voice was much improved. The secretion was also diminished, and sometimes the state of the lungs improved. The ulcers in the larynx cleared, the swellings diminished. The improvement took place in an insensible manner like the improvement under iodide of potassium and mercury in cases of syphilis. Only one very miserable case was deteriorated by increasing adynamia. In one case of aphonia, with great ulcers of the larynx, the voice became loud and clear, and the lungs much improved. Further experiments are very much to be recommended.

B. FRAENKEL has treated fifteen cases of laryngeal phthisis with the medicament. He also observed in cases of aphonia improvement of the voice, and cure of laryngeal ulcers; and in one case mortification of miliary tubercles, and great relief in cases of stenosis and difficulty of swallowing. Laryngoscopic examination two hours after the injection showed increased turgescence of the larynx. The bacilli coughed out after the treatment are not so easy to colour as before, and seem not to be so large.

Michael.

ASSOCIATION MEETINGS.

BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION.

Dr. SANDFORD, Vice-President, in the Chair.

March 20, 1891.

AFTERNOON MEETING.

AFTER the minutes of the last meeting had been read and confirmed, the Secretary read the statement of accounts, which was formally adopted.

Other business of a formal nature was transacted, comprising the election of Fellows of the Association.

Dr. SANDFORD (Vice-President) read the notes of the following *Case of Œsophagotomy in a Lunatic*. The case which I have the honour of bringing before the Association to-day is one which occurred in the Cork District Asylum, when the operation of œsophagotomy had to be performed for the removal of a large stone from the gullet of an inmate. I am indebted to the courtesy of Dr. Oscar Woods, Chief Medical Superintendent, and of Dr. Horace Townsend, Visiting Surgeon, for the privilege of doing so.

The patient, Patrick Conner, aged twenty-nine, was admitted January, 1887, suffering from dementia, and was subject to extremely violent attacks of maniacal excitement.

On February 18, 1891, he was reported unable to swallow. On passing the œsophageal tube, obstruction was experienced nine inches from the teeth. A hard substance could just be reached, but this resisted all efforts to dislodge it with ordinary instruments. The patient himself was extremely cheerful, and appeared to take a keen and half-amused interest in the proceedings.

It was determined to operate, and chloroform having been administered, it was thought advisable to make the incision at the right side, as a hard substance could be distinctly felt about an inch above the right sterno-clavicular articulation. An incision about four inches long was made, and the œsophagus reached by dissection between the trachea and large vessels. No vessel of importance was injured, but the omohyoid muscle was divided between ligatures.

The œsophagus was opened in the usual manner, and a large stone extracted, weighing 620 grains—being triangular in shape—the sides of which measured about one and three-quarters of an inch, and the thickness about three-quarters of an inch. The œsophageal wound was not sutured. The external wound was sutured with silver wire—a drainage tube having been inserted.

The temperature, the first day, reached 101.4°. The patient was fed

by nutrient suppositories and enemata. This continued for four days, the temperature sinking to 99° and 99·5°, and the patient appeared to be doing well in every way.

During the night of the fourth day the patient was seized with maniacal excitement, and became very violent, requiring three attendants constantly to restrain him. Hypodermics of morphia had little effect. Enemata and suppositories were injected.

During the fifth day maniacal excitement continued, and milk and brandy, beef-tea, etc., were administered by a tube, but were immediately vomited through the mouth and wound. Extreme exhaustion set in towards evening, though mental excitement continued. Patient was fed through the œsophageal wound to avoid faucial irritation, and food was retained.

Sixth day. Exhaustion increased in an unaccountable manner. Temp., 99·5°; pulse, 120; respiration, 28. Patient was kept under the influence of morphia as much as possible. It was difficult to restrain him when conscious, but he was evidently sinking from prostration.

Seventh day. Patient died.

Post-mortem. The œsophageal wound showed slight tendency to heal. In the intestines eight stones were found of various sizes.

In reply to Mr. Lennox Browne, Dr. Sandford said he believed that this was the forty-seventh case on record since 1735. The patient evidently died of exhaustion due to the maniacal excitement.

MR. MAYO COLLIER related a case of *Post-Diphtheritic Paralysis of Palate*. The patient was a coachman at Highgate, aged thirty-five, who two months before had had a slight sore throat, not sufficient to call for treatment. He subsequently developed symptoms of bronchial catarrh, for which he was admitted into the North-West London Hospital. A month later some peculiarity was remarked in his speech, and it was noticed that fluids regurgitated through the nose. He examined the man, and found there was complete paralysis of all the muscles of the soft palate. In addition to this, there was a discharge from the right ear, associated with absolute deafness on that side, and diminished power of hearing on the left side. Mr. Collier pointed out that the tensor palati muscle, according to Ross, was supplied by the sphenoid ganglion, but he had several cases on record in which disease of the intra-cranial portion of the facial nerve had been associated with complete paralysis of the levator palati. Other cases were on record in which an affection of the intra-cranial portion of the sphenoid ganglion had also caused complete paralysis of the levator palati, and a case recently operated upon by Mr. Victor Horsley, involving the removal of Meckel's ganglion, was unassociated with any affection of the palate, showing that this could not be the only nervous supply, and suggesting that the nerve supply might be derived from two sources. He insisted upon the fact that the muscles surrounding hollow tubes were not as a rule governed by intra-cranial centres, but derived their nerve supply from ganglia in their neighbourhood, and it was therefore probable that this was the case there. This would explain the state of the parts, complete paralysis due to an affection of the tube.

Mr. LENNOX BROWNE observed that, independently of the anatomical considerations, they readily acquiesced in Mr. Collier's views. The clinical aspects of the case were full of interest, and the case was an instance of those cases of diphtheria in which the diagnosis was only arrived at in consequence of post-paralysis. He pointed out that in the last edition of his work on diseases of the throat, he had quoted a case in which he had diagnosed diphtheria of the anus to have occurred in the adult by the paralytic sequelæ, and from the fact that one of the patient's children had subsequently contracted the disease, presumably in the water-closet, and had died. That was a case in which there was grave doubt as to the nature of the trouble. The interesting point was the fact that this man was occupied in stables, and that Mr. Collier's patient was also employed in stables. It was a curious thing that so many cases of diphtheria occurred in persons whose occupations took them a good deal into stables. The same information had been given him by Hermann, of Capetown, that, although the sanitary conditions of that town were indifferent, yet that diphtheria was most frequently seen in the outlying districts where the cattle were close to the dwellings. In one case down at Hartproosher, in a school, the origin was clearly traced to an adjoining pigsty. There seemed to be a consensus of opinion in favour of Renshaw's opinion, that diphtheria was due to a combination of decomposing animal and vegetable refuse giving rise to the specific germ.

Dr. DUNDAS GRANT observed that, when the subject of diphtheria was brought forward, it was difficult not to take it beyond the narrow limits of the paper, particularly in view of the intense interest that the subject excited among medical men, and even more so among specialists in throat diseases. It was difficult to make up one's mind which of the suggestions which the case afforded was the best one to take up. There was at any rate one moral. They had been told that the disease had expressed itself so slightly that its serious nature was not recognised at the outset, and that justified the assumption that the local treatment usual in such cases was not carried out. The one case was not perhaps sufficient to prove anything, but they all knew that the type of case in which post-diphtheritic paralysis was most marked was precisely the type in which the disease had not expressed itself definitely in the earlier stages, and in which consequently no treatment was resorted to. It behoved them, therefore, to accept the treatment of even a case of ordinary sore throat with some sense of responsibility. He had formerly passed some years in general practice, and he attributed his success in the treatment of cases of diphtheria to his practice of careful examination of every case of sore throat, a practice which he had always insisted upon even at the risk of ridicule at the hands of those who were less expert with the laryngoscopic mirror. The early attention to local treatment in these cases was, in his opinion, the chief agent in enabling him to obtain such good results in diphtheria. He could not say that he had not lost a case or two, but he would affirm that the cases in which the sequelæ were most marked were those in which he had made a wrong diagnosis, cases in which he had committed the error, common to every man in practice, of taking a case

of diphtheria for a simple case of tonsillitis. The moral of that was that local treatment ought to occupy the very first place in dealing with cases of diphtheria. There was of course a tendency to overvalue local treatment, but there were many who regarded diphtheria as a constitutional disease, to be treated exclusively by constitutional means. The truth, no doubt, lay between the two extremes, but he pointed out that, after all, the general condition was not one peculiar to this disease, but was common to all diseases of a suppurative kind, viz., septicæmia. Since his experience in this department had begun, the whole science of clinical bacteriology had sprung up, and this taught them beyond a doubt that there was a specific bacillus, which was to be found in the mucous membrane and subjacent structures in animals that had been inoculated for some time, and even upon the most superficial layers of the false membranes. Dr. Ruffer, in the "British Medical Journal," had spoken very definitely as to this, and that confirmed what he (Dr. Grant) had said as to the necessity for devoting themselves to the destruction of these bacilli, which were found on the surface of the mucous membrane. To go further back, if they read Donder's "Accommodation and Refraction," upon post-diphtheritic paralyses of the ciliary muscles, they would see, notwithstanding thorough and ready observations made with regard to the frequency of this lesion, how as soon as an energetic treatment of the throat was adopted, this sequela disappeared. He referred to the Milroy Lectures, by Dr. Thorne Thorne, and observed that it was evident from what had fallen from the speaker, that they were labouring under several delusions in respect of the etiology of diphtheria. It was astonishing how little it had to do with insanitary conditions. Statistics had been brought forward by Longstaff, in one of the most interesting books which it had been his lot to look through of late, the "Studies in Statistics," throwing a most extraordinary light upon this disease. It was made clear that the disease was not most frequent in the most populous districts, but on the contrary, in those only sparsely populated, where the conditions were least likely to enable insanitary conditions to affect the general health. Further, Dr. Thorne Thorne had quoted several outbreaks in which it was pretty clearly proved that there had been no origination of the disease *de novo*, but that the disease was due to infection by conditions which were called into activity from time to time. They would remember how this was gradually demonstrated in the case of typhoid fever; how cases which were supposed to be sporadic, proved to have been due to infection, of which he mentioned several instances. It was not always possible to trace the infection; no doubt the stables were to be blamed, but a great many of these cases appeared to be due to milk derived from certain cows suffering from what was apparently slight disease of the udders. It had been shown that the milk from these cows was capable of giving diphtheria to those who consumed it. Some investigations of Klein, to be shortly published, would show that the lymph from the udders of the cows would produce diphtheria in cats. These observations concerning cows seemed to him to give additional weight to the observations that had been made by Mr. Browne in reference to the outbreak at Capetown.

MR. MAYO COLLIER brought forward a case of *Symmetrical Growths (syphilitic) on the Vocal Cords*. The patient was a man, aged thirty, who had been a porter at the North-West London Hospital. He gave a well-marked history of syphilis, and several attacks of laryngeal catarrh. Within the last twelve months his voice had become somewhat hoarse, and on examining his throat he had found a well-marked fringe of warty growths on the superior part of one vocal cord, papillomatous excrescences due to syphilis, and to repeated attacks of catarrh. He subsequently removed them by the aid of forceps. He pointed out that on the first occasion of his examining the throat it was so extremely irritable that it was quite impossible to introduce a forceps even into the mouth, much less into the larynx, and cocaine remained absolutely without effect in diminishing the hyperæsthesia. Indeed that had invariably been his experience with cocaine in relieving spasm of the throat. It was vastly inferior to simple gargling with cold water, or the use of ice, or, still better, systematic training. He had day after day passed the forceps into his throat without attempting to touch any part of the larynx, and the ultimate result of the training had been that now one might, without exaggeration, allow his epiglottis to dangle in his trachea without his feeling it. Then he gave him large doses of iodide of potassium, and for some time he saw nothing more of him—for about three months, by which time he had quite lost his voice. He looked down his throat, and found that he had a mucous tubercle on the right vocal cord, and this he watched very carefully, ceasing the treatment in the meantime, and he found that the opposite aspect of the vocal cord became infected, and a similar growth presented itself upon it. The growth was at present absolutely symmetrical, and he had no doubt that this was due to infection by contact. He adopted no local treatment, but gave him perchloride of mercury and iodide of potassium, and these growths diminished almost to disappearance. The patient then discontinued his attendance, and since then they had begun to grow again. He was anxious to retain this case in *statu quo* in order to try an instrument which he had designed for the purpose of removing growths from the larynx. It was of course sometimes necessary to operate without any preliminary training, and his instrument, which he proposed to call the intubating cage, was like a rectal speculum, with three springs shutting up to the size of an ordinary lead pencil. When the instrument was perfected he intended to bring him before the Society, and show how the instrument was used. It enabled them when introduced to do whatever they pleased, and he thought it might be applicable to many other cases to prevent closure of the larynx during operation.

Dr. GEORGE STOKER pointed out that the year before last he had read a paper before the Society with regard to the administration of anæsthetics in operations on the larynx, and he had proposed the head-down position. On that occasion he had brought before the Society an instrument exactly like the one which Mr. Collier had just described, consisting of two lateral and a posterior blades. It was designed so as to permit of operation on the larynx while the patient was under the influence of an anæsthetic. In justice to Mr. Collier, he would admit that, so far, he had not met with a case in which he could employ this

instrument. It was eighteen times before he had ventured to operate, but some men would of course operate sooner than others.

Mr. LENNOX BROWNE asked what was the date of infection in Mr. Collier's case?

Mr. COLLIER said it was about ten years before, while he was in the army.

Dr. STOKER, in reference to the spread of the growth from one cord to the other merely by apposition, suggested that it was Mr. Collier's intention to lead them to suppose that the effect was due rather to mechanical irritation, even though occurring in a person the subject of syphilis. When he had met with this it had been explained on purely mechanical grounds, just as ulceration at the junction of the arytenoid cartilages was liable to be communicated.

Mr. LENNOX BROWNE said he had asked the date of infection, because it was unusual for mucous patches to come on ten years after the primary attack, especially in the larynx. He asked whether there was any evidence on the fauces of the disease.

Mr. COLLIER said there was.

Mr. BROWNE observed that this showed that the best of their theories might be bowled over. As a rule, tertiary evidences of syphilis were more ravaging than that. He was unable to concede that it was a case of infection from one cord to the other, because it was a recognised peculiarity that two vocal cords rubbing against each other would bring about a similar condition merely by irritation, and, moreover, as regarded mucous patches, symmetry was a characteristic of the affection. Mr. Hutchinson had insisted upon this tendency to symmetry, to "Dutch garden precision of distribution." It was a diagnostic point in a syphilitic patient also that he was not an irritable patient to examine, and this was a point of importance. In reference to the diagnosis between tubercle and syphilis, he pointed out that if they got a growth at a particular spot, the mere reiteration of contact would suffice to produce irritation, and in this case there was an affection of the under-surface of the vocal cords. He agreed with Mr. Collier, that the effect of cocaine was very disagreeable to certain patients, and was productive of intense spasm, lasting much longer than the anesthetic effect. Besides, they had ice or cold water with a whiff of chloroform when there was hyper-sensitiveness—just to the point of the patient feeling a singing in the ears without going on to general narcosis. He was then enabled to use his instrument with the greatest success. He mentioned that he possessed an instrument which had been presented to him by Dr. O'Dwyer in 1887, with his first set of instruments for intubation in the adult. It was exactly the same kind of instrument as that described by Mr. Collier. It did not often occur that they invented an instrument which they did not use, but it did happen that they overlooked instruments invented by others. That particular instrument had been shown at the International Medical Congress in 1887.

Mr. COLLIER discarded any idea of having forestalled Dr. Stoker. He hoped to have an opportunity of demonstrating the use of his instrument at their next meeting. He differed from Mr. Browne when he

stated that they seldom met with instances in which one portion of tissue was infected by an adjacent portion. In his own experience, nothing was more common than for one mucous membrane to be infected in that way. So common was it in fact that he was enabled to diagnose syphilis from the fact. He pointed out that it often took place as between the gums or the tongue and the cheeks, and the infection of a tonsil by the tonsil on the opposite side was frequent enough. Mr. Browne's argument was one that cut both ways, and it would not do to carry it too far. It was true that they might get affections on both elbows, but he was not referring to manifestations like that, but to affections of tissues in immediate apposition.

Mr. BROWNE said he did not dispute the possibility of infection by contiguity, but it was characteristic of syphilis in the throat that it was symmetrical independently of the apposition of parts. This could be seen in the illustrations in his work. A man, who detected a sore on one side of the tongue, would be negligent if he did not look for another on the opposite side, and that came to much the same thing as the elbows.

Dr. STOKER said it was one of the difficulties of the question that cases in which there was symmetry had nothing to do with the point under discussion, seeing that the parts were not in apposition to each other. The case of a mucous tubercle on one cord giving rise to a mucous patch on the other was quite a different matter, for symmetry was due to a constitutional disease.

Mr. BROWNE observed that this was not quite what he had said. He urged that as symmetry was a characteristic feature of syphilis in the larynx, therefore it must not be assumed that the second patch was necessarily due to infection from the opposite side.

Dr. STOKER said that in such case they would be contemporaneous, whereas in this instance the second was long subsequent to the first.

Mr. COLLIER said it was six months later.

EVENING MEETING.

Dr. DUNDAS GRANT, Vice-President, in the chair.

The Hon. Secretary (Dr. STOKER) announced that the discussions and papers would in future be published in the JOURNAL OF LARYNGOLOGY, and would be bound up separately at the end of the year. He also announced that the subscriptions for 1891 would become due in the month of June.

Dr. MACINTYRE read a paper entitled *Study of Bacteriology in Affections of the Nose and Throat*, with special reference to its influence in diagnosis and treatment. [This paper will be published in full in this Journal subsequently.]

DISCUSSION ON DR. MACINTYRE'S PAPER.

Dr. DUNDAS GRANT said that the first thing they had to consider was the relationship between these micro-organisms and the diseases with which they were associated. So long as Koch's four requirements were observed, this connection was clear enough. There was the further question of the

antagonism of different kinds, which was illustrated by the antagonism between the microbes of erysipelas and of lupus. What the nature of this antagonism might be it was impossible to say. Much still remained to be done in the way of identifying these organisms, either by studying their natural history or their reaction to stains. The next thing would be to classify and mark out the diagnostic table of these appearances, and if the author could tabulate them in this way they would be under a further debt to him. Passing on to the pathological micro-organisms he observed, in reference to the existence of an organism of lupus, that those who had heard of it were far more numerous than those who professed to have seen it. He himself had never been able to identify it, and when he asked several experienced bacteriologists they too had confessed not to have done so, though they knew someone who had. At the same time he admitted that the evidence of inoculations in the lower animals seemed to point to a close relationship between lupus and tuberculosis. He alluded to the distinction between epiblastic and hypoblastic blastoderm in relation to the various micro-organisms, which he thought was stretching the point rather far. There was, at any rate, no immunity as concerned the larynx. Again, it could not be stated absolutely that the mouth and nose enjoyed any immunity from tubercle, for it had been met with often enough on the tongue and palate, and in the nose, sufficiently at any rate to deprive the analogy of a great deal of its force. No doubt the respective areas offered different facilities for the growth of micro-organisms. Passing on to discuss the dwelling of the microbe he observed that it had not been found in the blood of infected animals, and the author's observations pointed to their being found in the deeper layers of the membrane in diphtheria, and according to Ruffer in the most superficial layer of the membranes. The moral to be drawn from these observations was of the necessity for early treatment of cases of diphtheria. It was only right to say that Ruffer's observations were carried out on sections taken from bodies after death, and, as Dr. Macintyre had pointed out, that might make a difference. The apparent want of accord between the observations of Ruffer and of the author might thus be explained. The bacillus of syphilis could not yet be said to be within their ken. That of pneumonia was interesting, but had still not been made out. The coccus had turned up in the middle ear and might possibly be found elsewhere. He referred to a paragraph which had recently appeared in the "*Lancet*," giving a simple plan for detecting the presence of the bacillus of tuberculosis in the sputum, by mixing the sputum with a weak solution of caustic potash boiling and precipitating. The formed products of the bacilli were precipitated along with the rest, and by conducting the process in a conical glass, it was possible to make out its presence even if in very small numbers. He pointed out that a negative result, when searching for the bacillus, did not absolutely show that none were present, for in certain cases which clinically had been recognised to be tuberculous none had been found. In conclusion he urged that the time had now come for them, as far as possible, to arrive at a definite opinion in respect of the value of Koch's fluid, and it would be an opportune moment to elucidate the matter and say definitely what

its value was in the treatment of tuberculosis. As the subject was formally before them in reference to some cases to be shown by Mr. Browne, he suggested that special attention should be devoted to this point.

Mr. LENNOX BROWNE said they had before them a much larger subject than that of Koch's treatment, though he doubted whether there were any present who were in a position to discuss the paper ; he himself, at any rate, did not feel equal to it. Within the limited time at his disposal, he had not been able to digest the facts which the author had brought before them. He expressed his admiration for the essentially clinical character of the paper, which smacked of the ward rather than of the laboratory. Dr. Macintyre had said that he (Mr. Browne) would make some remarks as to the early recognition of tubercle in cases in which no bacilli could be found, though admittedly of a tuberculous nature. No doubt the method of precipitating the solid matter from the sputum by caustic potash and boiling would facilitate the search, but certainly the ordinary quick methods were eminently unsatisfactory, so that when they did not find them it did not negative their diagnosis, though conclusive enough when the bacillus was found. The important thing to remember in pursuing a treatment for tubercle was his remark that one possible reason for the failure of Koch's treatment was the neglect of the accessory measures. Touching the identity of the bacilli of tuberculosis and lupus, it was like the old story of the German flute. He had heard of someone who could play it, but he himself was in the position of someone who could not talk German. To describe lupus as a continued form of tuberculosis was, he thought, an obvious mistake, and he was disappointed to find that Liebreich had taken lupus as a test to try the effect of his cantharadine treatment in arresting tuberculosis. A certain amount of caution was, therefore, desirable. He agreed that tubercle was developed much more frequently in the upper respiratory passages. It was, of course, rare for them to find it there in cases of pulmonary disease. It was met with, but in the vast majority of cases it was not met with there. That fact might be due to variations in the anatomical structure. It was an important point, the discovery of the bacilli of diphtheria in the superficial layers of the false membranes ; but as they had to deal with living patients, it was desirable that they should carry out their observations upon them, and not upon bodies in the *post-mortem* room ; in fact, he thought that it would be safer to ignore researches made on the dead. He agreed as to the attention to the local treatment, but he asked what that local treatment ought to consist of. If only the superficial layers contained the bacilli, no doubt rubbing the throat might be of use. If the deeper layers were infected it was another matter. They used to be told never to remove the deeper layers, because membrane would certainly form again, and doubtless if they kept tearing them away they could only do harm. He thought that Watson Cheyne was the first person in this country to inculcate the tearing away of the deeper layers and treating the raw surface, and that plan was well worthy of their consideration. He thought that a change of views was desirable concerning the undesirability of removing the

deeper layers of the false membranes, for it might be of service to treat the raw surface. That was to be deduced from the fact that in the living subject the bacillus was to be met with in the deeper layers as well. Then came up the question of the constitutional treatment—a very important point. They all made at present for the mercurial treatment of diphtheria, and he preferred the biniodide to the perchloride, because it did not precipitate albumen, and had a better effect on the membranes than the latter. Dr. Macintyre said that in an acute disease like this there was not time to attack the disease, and that remark should be borne in mind; also his remark that it was possible to do things with pure carbolic acid which it would not be safe to do with the impure product. The changes which had taken place in regard to the use of carbolic acid in Lister's methods might perhaps be due to his having used the impure acid, so that his carbolic spray was perhaps, after all, not so wrong as those had asserted who now derived the benefits of his discoveries. He hoped that at an early meeting of the Council of the Association some suggestion would be made to appoint a committee to carry the subject further. He looked upon the work of the evening as among the best they had done. They wanted more work in this direction and of this kind. Records of cases were interesting, but work such as that which Dr. Macintyre had done was what was wanted to justify the existence of the Association. Dr. Macintyre, in coming so many hundred miles to read his paper, had put the Association under a debt of gratitude.

Dr. CAMPBELL said he was very pleased to find that, working quite independently, he had arrived at the same conclusions as the author, in respect of the relationship of lupus and tubercle. With all deference to Koch, he felt bound to say that their identity was, in Scotch legal phraseology, not proven. Kaposi had urged that in this matter the clinical aspects ought always to override the purely speculative.

Lupus was a disease of long growth, and was long in developing itself. Had it been tuberculosis he presumed the patient would have been dead long ago. He pointed out that lupus attacked the orifices of the mouth, nose, &c., but so did tuberculosis, but if the two diseases were identical, why did they not run a similar course? They did not get implication of the lungs in lupus, nor dysphagia or discomfort. None who had tuberculosis of the throat survived five years, to put it at the outside, yet he could show two cases of lupus of the throat which had existed, so to speak, from time immemorial. Then again, in lupus, after many researches, he had found a bacillus which resembled that of tubercle, but how many others were there that resembled the bacillus of tubercle? The dog and the wolf were both of the genus *canis*, but they were very different animals, and he thought that the experiments to prove the identity of these two bacilli were failures. Some years ago he had read a series of experiments conducted in Paris. The series was a long one, but there were only two positive results out of fifteen. Considering the conditions under which the guinea pigs were kept during the carrying out of the researches, he thought that there were plenty of other ways in which they might have contracted tuberculosis. He had bought dead

animals at Leadenhall Market, and found that they had died of tuberculosis, without having been inoculated at all, and he asked what was to prove that the tubercle in these test animals was not of fortuitous origin. There was a far deeper question as to why pathogenic organisms sometimes took root in the organism, and sometimes failed to do so. The fundamental principle was that the perfectly healthy body was proof against any infection whatever. He mentioned that years ago in Edinburgh, in the fever wards, there was a nurse, a strong healthy woman, who had faced every variety of infectious diseases, and rather prided herself on having an immunity against such diseases. Some years later, however, she got a little out of sorts, and she contracted typhus fever, and died. That meant that the patient must be in a particular condition of body for the poison to strike home. The same reasoning applied in the case of doctors in general practice. He himself had seen 150 cases of scarlet fever in a month without ever having contracted the disease. Their duty as physicians was to get their patients back to normal health as promptly as possible, hence the advantage of sea air, country air, and the like. It was quite a different matter when it came to giving the patient something to kill the bacilli. They might give the patient mercury, and they might kill the bacilli. That was possible, but in so doing they would be going a long way towards killing the patient himself. Strengthen his tissues, and they would throw off the morbid influences for themselves. That was the alpha and the omega of treatment.

Dr. STOKER agreed in the analogy of the dog and the wolf, but he pointed out that though closely allied, dogs did not breed wolves, and *vice versa*. The only proof by which the theory was upheld was that the tubercle bacillus was a poison, which they injected into the healthy body of the lower animals, thus producing a disease. Then, again, a cure was arrived at by the fact that, when the second injection took place, under the same circumstances, a cure resulted. Of course there was nobody who could challenge the statements which that gentleman made. No one doubted that their immunity from contagion was due to the actual condition of their tissues at the moment of exposure. That was exactly the theory that was held by Koch. He said, if you find a soil upon which these bacilli can grow and flourish, there you can set up tuberculosis, while in a healthy body no effect followed. He mentioned a case of pulmonary phthisis in a patient who had not been steady in his youth, and who developed the undoubted symptoms of the disease at the age of thirty-eight, bacilli being present in the sputum in any quantity. He had now been three months under Koch's treatment, and the improvement was in every way satisfactory. During the first two weeks his weight had increased 6lbs., the moist sounds had disappeared, the evening temperature had diminished, together with marked amelioration in the character and the quantity of the sputum. He thought it was only right to record their actual experience. He had nothing but horror for those who used such a remedy in advanced cases, but it was quite otherwise in such a case as he had narrated. The study of bacteriology was a large subject. He referred to the investigations of Mosetig, of Vienna, who had observed that when cancer cells were stained with aniline the nuclei were destroyed.

He had, therefore, injected interstitially a 1:500 solution of picrotoxin. One of his colleagues had tried this in a case of epithelioma of the face, and so far the results had been most surprising and most gratifying. The growth was gradually disappearing.

Dr. MACINTYRE, in reply, thanked the Fellows for their kindly appreciation of his work, which he admitted had taken up a great deal of his time. In reference to his remarks as to the epiblastic and hypoblastic structures, he said they only amounted to this, that owing to anatomical differences of structure, certain tissues might not be so liable as others to take on particular forms of growth. He simply meant to convey that it was comparatively rare to find tubercle in the nose and mouth, and it was admitted that tubercle was much more common below the epiglottis than above it. With reference to local applications, he recalled a discussion at the meeting of the British Medical Association, at Glasgow, at which a gentleman had said that after many years' study he had come to the conclusion that diphtheria was a local disease manufactured near the tonsil, and so much impressed was he with this view that he had decided the very next case he came across to stick a red-hot poker in the mouth and rub the tonsils. If they believed that diphtheria would be cured by removal of the parts, then this was a very efficient form of applying the actual cautery. With regard to the question of the identity of lupus and tubercle, he agreed with Dr. Campbell. As the result of long clinical experience, he was convinced that there was a difference between the diseases. They occasionally got tubercular ulceration of the tongue, but it did not resemble in the slightest the lupoid ulceration. He had under his observation a man with a tubercular cavity in the lungs, who, some time ago, bit his tongue, and that proved the starting-point of a tubercular ulceration. It had a hard irregular surface, and gave one the impression of tubercle of the lung. It was distinctly different from lupus. It was painless, at least the patient did not complain of pain, but the man's general condition was so bad that he had not thought it worth while to pay any attention to it. He admitted the difficulty of finding the bacillus in lupus, but lupus had not entered for a great share of his work at all. A dispensary was not the place to get hold of such cases, because they went to a skin hospital. He was not, therefore, prepared to give the same opinion as Dr. Campbell, but so far he agreed with him. Recognising the lack of specimens of lupus-bacillus in his collection, he had applied to a gentleman at Berlin to send him some, because he wanted some fresh material, but he had been informed that none could be had, because all the cases had been cured by Koch's treatment. He was convinced that there had been too much trying of late to find some remedy to apply in particular to tuberculosis, leading to general measures being neglected. He mentioned the case of a gentleman who had been recommended to go to the Cape, but had delayed his departure because of the florid accounts that came from Berlin. He had given up the idea of trying Koch's treatment now, but his chances of recovery had been forfeited by the delay. The attempt to bring something forward which should kill this bacillus, either directly or indirectly, had almost

pushed the ordinary remedies aside. It could not be impressed too much upon them that there had only been thirteen cases of alleged cure out of 1200 in which it had been tried. Personally, he would rather take a voyage than trust to this treatment.

MR. W. WYATT WINGRAVE read the following note on *Microscopic Specimens with Lungs and Larynx from a Patient treated by Koch's Remedy*, being the report of the *post-mortem* appearances in a case of laryngeal tuberculosis treated by tuberculin. (Mr. Lennox Browne's case No. 8, in his essay on Koch's remedy.)

LUNGS.—*Right.* The pleural surfaces were slightly adherent at the apex. The upper lobe was studded with caseous tubercles, which here and there were actively breaking down. The remaining lobes were free from tubercles, but showed marked congestion and œdema.

Left. Pleura everywhere so adherent that the lungs were much torn in removal. Both lobes were in an advanced stage of destruction, being riddled with suppurating chambers containing grumous non-fœtid pus. There were three large cavities, two in the upper lobe, and one situated in the base of the lower lobe posteriorly; but practically no part of the lung was free from necrosis.

The **LARYNX** presented the usual features of tubercular ulceration mainly involving the right vocal cords and ventricular bands, with marked thickening of both ary-epiglottic folds. The right arytenoid cartilage and its cornicula were bare, and the ulceration had also invaded the left sub-glottic region. Excepting the left kidney, in which was discovered a small abscess, the remaining viscera were entirely free from tubercle. Microscopic examination proved the tuberculous nature of the morbid processes.

REMARKS.—Perhaps some apology would be deemed necessary for presenting such an ordinary specimen to the Society, were it not attended by circumstances of more than ordinary interest. It is only fair to the remedy and its discoverer that all available evidence (especially that of the cadaver) should be openly and impartially investigated, and the rarity of such an opportunity in England may be taken as a sufficient justification for the exhibition of these specimens.

The patient, on admission, presented some decided, though distinctly localized pulmonary disease, of three years' duration, and apparently quiescent; also unmistakeable laryngeal tuberculosis of less than twelve months' duration. His temperature was carefully watched for eighteen days, and it maintained a mean level of 99°F. After the first injection, pyrexia rapidly developed and increased, the lung symptoms were as it were "lit up," and his general condition became so grave that the treatment was stopped after the fourth injection of '006 grammes. Still he grew rapidly worse, and fifty days after the last injection, necropsy reveals an extent of disease contrasting strongly with the conditions which the physical signs on his admission indicated.

It is interesting to note that the disease was distinctly limited to the viscera which were primarily attacked (with the exception of the one kidney), so that notwithstanding the violent pulmonary "eruption," tuberculous processes were not established elsewhere, although there was ample time for such. Was the pulmonary tuberculosis secondary to the

laryngeal ? is a question which naturally suggests itself. It is quite possible that the early pulmonary lesion was non-tubercular. The freedom of the other viscera from tubercle is in favour of such a view. It must not be overlooked also that the patient had for many years been addicted to spirit drinking.

Still, whatever interpretation this evidence may suggest or justify, it must be admitted that the facts are deficient neither in interest nor significance.

Dr. STOKER related a case in which an *Epitheliomatous Growth of the Larynx* had been removed by intra-laryngeal operation nine months ago. The patient had been seen by several men. Two portions of the growth had been examined by competent pathologists, and had been pronounced to be epithelioma, and the result was the same with three subsequent portions. There was the usual ulceration, and the question arose as to the further treatment. It was decided that no extra laryngeal operation was desirable on account of the age of the patient, and because he was suffering from chronic bronchitis. Last, but not least, the patient firmly declined to allow of any operation. With a good deal of trouble the growth was entirely removed by intra-laryngeal methods, and the base was freely cauterized, and the patient went away. He saw him again in October last, and there was no sign of any recurrence, though there was still some congestion of the larynx. He had written to him the other day, and he had received the answer that he was not troubled in the least by his throat. He had an opportunity of examining him on the previous Saturday, and all that he found was some congestion of the left vocal cord. He did not wish to prophesy that there would not be any recurrence, but, in any event, the patient's life had been prolonged by the operation. There was, of course, the question of diagnosis, but although some persons might decline to be guided by negative symptoms, nobody could deny the positive ones. In regard to the operation itself, he wished to express his entire disapproval of forceps of every kind. He preferred the wire : in the first place it was a fine body, and it was, consequently, possible to see something of the growths that were to be removed, a thing which was impossible with forceps ; further, it destroyed the roots from which the growth took its origin. With the forceps, one could not be sure of the point one was going to touch ; and, lastly, there was the necessity of subjecting the patient to a prolonged course of training, which rendered manipulation easy. He did not agree with what had been said in regard to the use of cocaine. He thought it was of far greater benefit to the human race than either chloroform or ether, and he thought it had brought about a complete revolution in the matter of intra-laryngeal surgery. The aggregate of human pain was not made up of large operations, but of an infinity of little pangs such as were caused in the removal of tonsils, small growths, and the like. To come back to his case, he said the result of the operation had been very gratifying to himself, and probably to the patient, but he felt bound to testify to the courage and endurance of the patient in submitting to the treatment.

Mr. LENNOX BROWNE said that Dr. Stoker had omitted to state that he (Mr. Browne) had advised immediate operation. They could quite

understand how Dr. Stoker had succeeded in persuading the patient where neither Teuton nor Englishman had been able to overcome the reluctance of the patient. He had impressed the patient with the necessity for immediate operation, but his wife was totally opposed to it. He showed a drawing which had been made of the laryngeal appearances by the gentleman who first saw the case. It was positively a work of art. This gentleman had told the patient that it might be a fibroma (there was only a small projection on one vocal cord) or develop into a cystic cord. That was in 1886, and the patient was then sixty-two years of age. He did not see the patient again until 1888. At that time there was no doubt as to its being cystic. He believed he had seen him again in 1889, but there was not much change ; but the third time the progress was marked, and he had again strongly urged the necessity for an operation. While he congratulated Dr. Stoker upon his success, he pointed out that there was no sign of any enlarged gland, no emaciation, no laryngeal spasm or shortness of breath. He reminded Dr. Stoker that he had reported the case of a man under Fraenkel, of Berlin, who had been treated for an undoubtedly malignant growth on one vocal cord, and successfully, by means of the galvano-cautery ; and that was the second case he had read of. He was delighted to hear Dr. Stoker speak as he did of the use of the forceps. Speaking with an experience of nearly twenty-six years, he said he had never introduced a pair of forceps into the larynx, although he had from nine to twelve cases a year, and he thought one could get on very well without them. With regard to cocaine, he could only add that in many patients it proved more of an irritant than an anæsthetic, and he mentioned a case in which the first operation having been carried through under cocaine, the patient, on a second occasion, said he suffered less without it.

Dr. DONALD STEWART recalled a case brought before the Medical Society of Vienna by Schnitzler of a growth recognised to be carcinomatous by several independent pathologists. That was many years ago, and the patient lived for many years after. That probably was a case of the same category. He had had only two cases of intra-laryngeal growth, which he had attempted to remove by the forceps, and he was fain to confess that he had failed to achieve his object, only securing pieces thereof. These cases were still under his observation, the patients being fairly comfortable, but not entirely removed. He was very pleased to hear of the advantages attaching to the use of the galvano wire.

Dr. CAMPBELL corroborated what Mr. Browne had said about cocaine acting as an irritant. That very day he had injected some of a 20 grain to the ounce solution for the removal of some cysts of the scalp, and he never remembered so much pain being complained of.

Dr. STOKER pointed out that such a solution was not likely to procure any relief from pain ; nothing under a 20 per cent. strength was likely to be of service.

The Society then adjourned.

[The report will be concluded in the next number of this Journal, in which will also be published the papers read by Mr. Lennox Browne and Dr. Macintyre at this meeting.]

REVIEW.

Physiological Quantities or Constants.—V. II. WYATT WINGRAVE, M.R.C.S.
Kimpton, London, pp. 41.

THE most practical of specialists cannot now-a-days afford to throw aside his once crammed physiology, and a genuine aid to the acquisition and retention of the facts of that department of science will be a not unwelcome addition to his study table. The work before us has the advantage that it can be comfortably carried in the pocket—even the waistcoat pocket—and at odd moments may be extracted for reference on particular points, or for a well-repaid general *feuilleton*. Those who have at all recently read up such a work as Foster, Landois, Kirke, or even Ashby, must have found themselves at the end of a chapter in fair possession of the general facts, but somewhat exhausted by the endeavour to cope, at the same time, with the figures. The margins of the leaves and the fly-leaves are generally utilised for scribbling down these troublesome numbers, but to collate them in the present convenient form seems to us a most happy thought on the part of Mr. Wyatt Wingrave. Many readers (besides “students preparing for examination”) will greatly refresh their memories of larger works, and exercise themselves in recalling the facts, while using Mr. Wingrave’s figures as pegs on which to hang them. We have here offered, we think, a good *raison d’être* for this practical and unpedantic, if necessarily rather “dry” little work.

Dundas Grant.

NOTES.

NURSE MARIAN PINCOFFS has designed some “Nurse Instructions,” which are published by Gilbertson & Sons, St. Andrew’s Street, Holborn Circus, London.

This is a sheet on which are printed all the matters which are requisite for the nurse in attendance on a patient to have given as instructions. The doctor is supposed to fill up the blank spaces with orders as to food, drinks, medicines, temperature taking, how often to be roused, position of the patient, washing, sponging, baths, temperature of room, poultices, fomentations, etc., etc., enemas and vaginal syringing, gargles and inhalations, specimens of urine, fæces, vomit, etc., for examination, orders what to do in case of emergency, etc., etc., so that there can be no mistake as to the nurse’s instructions. The sheets have met with commendation from hospital physicians, and we have no doubt will prove of great service. It is in private nursing where instructions are so frequently evaded or neglected, perhaps carelessly given and badly understood. With such a sheet as this, signed by the doctor, there can be no excuse on the part of the nurse or doctor if the fullest instructions are not given and completely carried out, and Nurse Pincoffs has supplied a want in publishing these charts of instructions.

WE are requested by the Royal College of Physicians of Edinburgh to make the following announcement :—

PARKIN BEQUEST.

In terms of the Bequest made to the Royal College of Physicians of Edinburgh by the late Dr. John Parkin, Fellow of the College, a Prize is hereby offered for the best Essay "On the Curative Effects of Carbonic Acid Gas or other forms of Carbon in Cholera, the different forms of Fever, and other Diseases."

The Prize is of the value of One Hundred Pounds sterling, and is open to Competitors of all nations.

Essays intended for Competition, which must be written in the English language, to be received by the Secretary not later than 31st December, 1892. Each Essay must bear a motto, and be accompanied by a sealed envelope bearing the same motto outside and the author's name inside.

The successful Candidate must publish his Essay at his own expense, and present a printed copy of it to the College within the space of three months after the adjudication of the Prize.

In name and by authority of the Council of the College.

G. A. GIBSON, M.D., Secretary.

9th March, 1891.

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BACTERIOLOGY IN RELATION TO DISEASES
OF THE THROAT AND NOSE.

By JOHN MACINTYRE, M.B., C.M.

(Read at the Meeting of the British Laryngological Association, March 20, 1891.)

PART I.

Mr. President and Gentlemen,—In every branch of medicine and surgery the study of bacteriology has become an essential part of our work. It is therefore quite to be expected that in a society like ours this subject should form an important part of the practice of each surgeon. Within the past two or three months, the facts known to most of us have been emphasized by the recent discoveries and attempts to base our diagnosis on a sound and scientific basis. Without attempting to detract in the slightest from the value of the discoveries at present on trial, it will not be forgotten by those who are conversant with our literature that many workers have been for a long time doing their best to prove the necessity of early recognition of the more incipient affections, such as tubercle.

The Council have decided that a discussion should take place on the study of bacteriology in affections of the throat and nose, with special reference to its influence on diagnosis and treatment; and in many respects the upper part of the respiratory tract offers an opportunity for observation unequalled in any other part of the body.

In introducing this discussion we have decided to approach the subject from three different points of view. In the first place, to refer to a few of the more important general facts bearing upon the subject, without a

knowledge of which it is impossible to appreciate its true value. Secondly, to devote some time to the consideration of the results following the introduction of the micro-organisms into the tissues. Thirdly, to take into consideration the methods of treatment at our disposal.

Microscopic specimens, cultivations, diagrams, photographs, etc., have been placed before you, so as to demonstrate, as far as possible, the different points taken up in this paper.

Probably no department offers greater difficulty to the surgeon or physician than that upon which we are about to enter, and certainly in no department is it more necessary that every possibility of error should be excluded by forethought, efficient training, and careful manipulation. Indeed, in the hands of the most skilful doubt was for long thrown upon many of the now established facts because of inefficient methods, and no one can estimate the amount of difficulty and labour later experimenters have had to undergo, in order to correct the earlier and, in many cases, misleading statements placed before the profession. No sooner have we asked ourselves, What are these micro-organisms? than we are beset with the first difficulty, because, as yet, no one has been able to classify these organisms on a scientific basis, and their true place in the vegetable kingdom has not yet been assigned. All attempts to base or classify fungi on the presence of chlorophyll or morphology must be unsatisfactory, but the true place which they occupy in Nature may be safely left to the consideration of those more particularly devoting themselves to the study of botany. It is quite sufficient for our purpose to know that they are the lowest forms of organic life, that the structure in most cases is pretty well defined, that they are, with one or two doubtful exceptions, devoid of chlorophyll, and incapable of evolving material for their structure from organic matter. As they mostly multiply by division, the term "Fission-fungi" has been given to them, and so they are classified as "Schizomycetes."

We have comparatively little interest in any of the other forms of fungi, although the mould-fungi, or fungi proper (Hyphomycetes), in some instances are interesting from their pathogenic action in the lower animals, mainly in insects. Yeast-fungi (Blastomycetes), so far, are only of interest to us in the single instance of thrush, while the animal-fungi (Mycetozoa) have not received sufficiently careful consideration to make them of anything like scientific value to us at present.

A great amount of interest has been excited of late in the theory involving the parasitic nature of infectious diseases, and the causal connection between micro-organisms and specific affections has to a considerable extent overshadowed the other parts of this study. If, however, we wish to understand the action of these organisms upon the tissues, it must never be forgotten that bacteria may be found in the body perfectly harmless. Secondly, they may perform physiological functions, and, as we hope to show in this paper, they may even have a beneficial effect in certain pathological conditions. It is therefore necessary to recognise the form, function, and general vital phenomena of micro-organisms before taking up those which are really or doubtfully pathogenic in nature. Ever since 1828, when Ehrenberg proved the presence of minute living organisms constantly in our surroundings, the subject has given rise

to great interest. Caignard Latour and Schwann eight years later did great service by demonstrating the vegetable nature of yeast. This discovery might be looked upon as the foundation of the vitalistic or true germ theory, and Schwann in his later work, in 1837, by asserting that in the air there are present fermentative and putrefactive germs, led to the causal association of these in the minds of men. Before this time the association of micro-organisms with the fermentative processes was considered an accidental one, or, at the most, that the cells might act so as to condense the oxygen and pass it over to the other substances, and so produce the decomposition of the sugar. To prove that the process was really a physiological one it was necessary to demonstrate that living cells were present in all fermenting fluids, that by the exclusion of these cells the process would not be developed, and in this connection the names of Van de Broek, Pasteur, Lister, and Cheyne will be for ever remembered. It is needless now to refer to the magnificent work which demonstrated these two important points, nor to do more than mention the names of Ehren, Tyndal, Pasteur, Cohn, and Sanderson, who did so much to show that these fermentative organisms are carried everywhere, and that, unless carefully excluded, fermentescible substances will undergo this change. Although these facts were placed on a comparatively sound basis, the work was by no means complete, and that of Pasteur, in his researches upon the different kinds of micro-organisms giving rise to different and specific actions, can never be over-estimated. The progress of the vitalistic theory from the assumption that one ferment only existed, to that in which it was shown that numbers existed, and that each might have a specific action, was an important step in the history. The objections to the theory, such as fermentation in spite of supposed exclusion of germs, the presence of minute living forms in fermentescible fluids, the comparatively small power which micro-organisms showed in the breaking-up of albuminous solutions, and the presence of so-called chemical fermentatives, are now of little more than historical interest. The sources of errors in the experiments on the one hand, and the hypothetical views of the chemists on the other, are now of comparatively little value, except in the sense that they afford us examples of the necessity of great care and attention in manipulation in order that the progress of science may not be hindered. There can now be little doubt in the minds of most men about the association between these germs and the processes above referred to, although an amount of doubt exists in the minds of some about the parasitic nature of germs in the production of disease; that is to say, while it is generally admitted that they may, by their life processes, destroy organic material, split up higher into simpler compounds, afford nutrition for the higher plants containing chlorophyll, and produce fermentation, yet for a considerable time a line was drawn between these and the possibility of minute plants producing disease in the lower and higher animals. But the possibility of this is by no means a new idea, for Miller tells us that Varro, in the first century B.C., suggested that epidemic diseases might be due to some invisible element—a *contagium vivum*.

Early in this century Bassi placed this on a somewhat satisfactory

basis, and in 1838 Pouche clearly proved the causal association of the mould-fungus with disease. In 1840, Henle's deductions on this produced a great influence, and ever since then the theory of the parasitic nature of disease has been advancing, although each step has been vigorously opposed. The result has been the magnificent work of Pasteur and Koch, and for the particular methods of investigation of the latter the scientific world must ever remain indebted. Koch may or may not be estimated in the future by his cure of tuberculosis, but the work done by him in the study of these organisms, in the methods of cultivation outside the body, the isolation of different species, and his discovery of the bacillus of tuberculosis, will ever be regarded as classical landmarks in the study of infectious diseases. It may be, as some even yet assert, that the bacteriological question has been too far pushed in medicine, but those who are at all sceptical of the causal association of these micro-organisms will have great difficulty in disproving the mass of facts which are now being placed before the profession from all parts of the world. In fact, we might fairly state that there are few things in medicine resting upon a surer basis than the parasitic nature of disease, and the facts made known by Koch on tubercle alone are sufficiently convincing, and we must remember that there are affections less doubted than it.

It must not be forgotten that it is no mere accidental or common association to find these organisms in the tissues, because before an organism is considered to be the cause of a particular affection it must have been found in the blood or tissues of the animal affected. It must also have been cultivated through many generations outside of the body, and after reintroducing it into the tissues of another a similar affection must be produced. Lastly, the same organism must have been found in this second host and cultivated again outside of it, to place all possibility of coincidence or accident out of the question. We are forced to the conclusion that the parasitic theory of disease is not only the most rational, but one which leaves no doubt upon the minds of those who have carefully carried out the experiments in a typical case, or who have even had the advantage of seeing others do so.

These organisms consist of minute, round, oval, or cylindrical cells, devoid of chlorophyll, and requiring already formed organic compounds for their life. They vary in size, measuring transversely on an average '0001 m., and two to four times that measurement in a longitudinal direction. The cells have no nucleus, are composed of protoplasm, and the small and most of the larger forms have a homogeneous translucent appearance. Some of them in their substances or membranes, should they have the latter show distinct colours. For the most part they are produced by fission, in others by spores, and it may be by separation of a portion of the cells from the original cyclus. Antagonism between the different kinds of bacilli has been noted, and in cultivating several generations of different species by a process of exclusion it comes about that in the end we may only have one instead of a number present, as if the strongest had crowded out the others. Lastly, it may be that their products, through too great acidity or alkalinity, may arrest their own growth—in other words, to a certain extent they are self-destructive.

Speaking more particularly, they may be considered as (1) having an action on lifeless matter, zymogenic or fermentation bacteria ; (2) chromogenic or colour-forming bacteria ; (3) ærogenic or gas-forming bacteria and (4) saprogenic, or those that produce putrefaction. In connection with these, we must ever remember that the products of living organisms vary, and so they may be harmless or prejudicial. The best example of the latter are the ptomaines, which are now being so carefully sought after, and whose physical properties are being so thoroughly investigated.

A few such, as some of the spirilla, have a reaction something like that of starch with iodine ; others, particularly the sarcinæ, have a distinct membrane. Some are movable and capable of a rotary movement or oscillation, and, as Loeffler has shown, have cilia. The analysis of their construction is as follows : Water, 84·81 per cent. ; albumen, 13·03 per cent. ; fat, 1·20 per cent. ; ashes, 0·64 per cent. ; residue, 0·32 per cent. (Nencki). A glance at this composition is interesting considering the nutritious material upon which we usually cultivate them, consisting as it does of albumen, carbo-hydrates, and a small quantity of salts. Temperature in excess in either direction has a great effect upon them, 25 to 40° C. being the range ; above this and below 5° C., growth is retarded or arrested. Some of them require oxygen for their development and are termed ærobic, some anaerobic are independent of this gas, while others will grow for a time with or without oxygen. Acids and alkalies in excess retard them, while light and electricity have not been found as yet to have much effect upon them.

It may have seemed quite unnecessary for us to point out these physical characters, but we have not done so simply to remind you of the vital phenomena of these organisms, but rather by way of suggestion, because many of the facts which we have mentioned have been taken advantage of by different workers in therapeutics. For example, the rendering of the soil unsuitable for the growth of the specific germ lies at the bottom of Koch's work. The arrest of the growth of these germs by temperature has been attempted by means of the apparatus for inspiring hot and dry air, and others have attempted to arrest their growth by keeping the patient in cold air. Again, experiments have been attempted to do this by means of the stains in use for detecting the different species. Attempts have also been made to use acids and alkalies, and the antagonism of these organisms has even been utilized by the inoculation of tumours, lupus, etc., with the streptococcus erysipelas. In fact, there is no observation about the vital phenomena above mentioned which has not been carefully weighed in the hope that it might be turned to some therapeutic use. There only remains, therefore, in this part of the paper to refer to one other feature, viz., the forms which those bacteria assume. In doing this we have found it advantageous to adopt De Bary's simple classification.

Three main forms are distinguished. The round forms are commonly known as cocci and the terms "micrococcus," "diplococcus," etc., in such frequent use explain themselves. The term "bacterium" was intended for short straight rod forms, but is not so frequently used in classification. The rod-like forms are now grouped under the head of "bacilli," and the

third are the spiral or corkscrew form, "spirilla." By the combination of several cells, varieties of the above may be formed. For example, we may have streptococci or those in chains, groups or staphylococci and zooglæa forms produced by the gelatinization of the membrane, and so on.

Under the microscope typical forms of the bacteria have been placed, and on the screen a number of photos of them will be shown later in the evening.

(To be continued.)

CASES ILLUSTRATING THE EFFECT OF TUBERCULIN (Koch's Remedy) and of CANTHARIDINATE OF POTASH (Liebreich's Remedy) ON CASES OF LUPUS AND TUBERCULOSIS.

BY LENNOX BROWNE, F.R.C.S.E.,

Senior Surgeon to the Central London Throat, Nose and Ear Hospital.

(*Read at the Meeting of the British Laryngological Association, March 20, 1891.*)

THE cases of some of the patients brought here this evening have been already reported up to a certain date in my recent publication on "Koch's Remedy in relation specially to Throat Consumption."

Case I. is that of A. F. (No. 6 in the book), who is suffering from lupus of the face, especially of the nose and larynx. Treatment was commenced on December 14th, 1890, and from that date up to the present the patient has had eleven injections, commencing with two milligrammes, and extending to two centigrammes. It cannot be said that the lupus of the nose is cured, but there is diminished reaction at each fresh injection, which may indicate that there is less lupus tissue to be attacked, or as some would have it, that the system has become habituated to the poison. The condition of the larynx has, however, exhibited a great though gradual change for the better, a change which is not comparable with any treatment I have hitherto seen pursued with that exceedingly torpid disease.

Beyond these evidences of the remedy on visible lupus tissue, the influence of the injections on old scars has been most interesting. On the day following the second injection, it was noticed that three red patches had appeared, one at each angle of the jaw, where there were sores two years ago, which had healed spontaneously, and a third under the chin; this patch was the largest, and was much swollen. It represented the site of a gland which had suppurated two years previously, and which had apparently been quite healed. The changes in appearance of the scar formerly treated by Dr. Campbell were also interesting, and afforded very satisfactory evidence of the success of his treatment. The colour was much intensified, and less glazed; at the extreme margin of the upper and outer angle, as well as at the lower and inner, there was very slight desquamation, but there was no breaking out whatever of the main

surface of the cicatrized area. The eyelids were red and swollen. The scar on the hand was unaffected.

Another interesting feature was the fact that on two or three occasions he had anuria, in some instances lasting for a few hours. The general health has been unaffected injuriously in other respects, and the body weight represents a gain of five pounds in the three months he has been under treatment.

Case II. is that of H. W. (No. 7 in my book), affected with lupus of the nose, fauces, and larynx. He has been under treatment since December 14th, 1890, and has had nine injections, which commencing with three milligrammes have been increased up to a centigramme.

In this case, no more than in the former, can there be said to be cure ; and it is especially noticeable that the small patch of lupus—by no means a deep one, or actively ulcerated—at the angle of the lip reacts with each fresh injection. Another point of interest is the appearance of active nodules on the stellate scar at the back of the pharynx, which occurred on reaction of an early injection.

A further point is the very patent effect of the remedy on the general system ; the temperature having risen on one occasion to 104.8° F., accompanied with general disturbance, even to the extent of delirium. There has, however, been no permanently ill effect on the general health, as is evidenced by the fact that the boy now weighs 6½ lbs. heavier than he did when first admitted for treatment.

Case III. is that of Elizabeth H., aged fifty-one (No. 26 in my monograph). In this case a doubtful diagnosis of lupus of the ear was confirmed by injections of tuberculin. She was admitted for treatment on December 13th, 1890, and she has had thirteen injections with very little effect on the general health. The first injection was five milligrammes, and the last one seven centigrammes. The temperature never rose beyond 101.5° F., and on the occasion of the last injection it was less than 101° F. It will be noticed by measurements that the affected ear, which was formerly a quarter of an inch larger than the other, is now reduced to equal dimensions, and the reduction in the thickening is proportionately decreased. There is also improvement in contour, and an easy recognition on inspection of the various fossæ and prominences of the auricle, which were previously quite merged in the infiltration.

The next three cases have come under my treatment only within the last few weeks, and are not therefore alluded to in my essay.

Case IV. : James P., aged forty, residing at Bournemouth, was sent up to me by Dr. Gardiner of that town, and admitted into the hospital on March 4th, 1891. The patient has complained of a sore throat for twelve months, which gradually increased in intensity until last June, when he first sought medical advice. The voice became worse in November last. Odynphagia came on a month ago, the pain shooting up to the left ear. Had lost weight, and been troubled with night sweats. *Sputum* frothy and scanty, but without tubercle bacilli. No hæmoptysis, except a small quantity after a severe attack of coughing. One of the patient's sisters died of phthisis, and another sister is very delicate in the chest.

Laryngoscopic examination showed considerable hyperæmia of the left vocal cord, with a distinct "notch" made by ulceration just anterior to the position of the vocal process.

Examination of the chest revealed slight dulness at both apices, especially the left, where both vocal resonance were increased, attended by some moist *râles* and prolonged expiration. The heart's action was very feeble, but no murmur could be detected.

On March 5th I commenced with an injection of one milligramme of tuberculin. This was repeated on March 7th with three milligrammes, and on March 11th with five milligrammes, the temperature after this last injection reaching 102° F.

On March 13th I substituted Liebreich's solution for the tuberculin, which I have continued to inject daily to the number of seven. On the first three days I injected two decimilligrammes, and the last four days have increased it to three decimilligrammes. The temperature under this last remedy has not been increased at any period, but, on the other hand, it is not less than when he entered the hospital. A swollen gland at the angle of the right jaw became softer and smaller, and the pain on swallowing almost entirely disappeared under the influence of the tuberculin. There has been neither improvement nor retrogression under the influence of the substituted remedy, except that his night sweats are diminished, and there has been hardly any perspiration of reaction. Locally, the ulcer in the larynx gives evidence of healing by granulation.

Slight dysuria, with urethral tenesmus, has been experienced, but there has been no trace of albumen.

P.S.—April 21st: Examination to-day shows that the affected cord is quite healed, but somewhat congested. He has had three injections of tuberculin, and thirty-five of Liebreich's remedy. The temperature is almost normal, and the body weight is five pounds in excess of that registered on admission. He leaves to-day for Bournemouth.

Case VI.: W. S., aged twenty-nine, unmarried; iron worker. Family history: Father drowned; mother living and healthy; two brothers and sisters living and healthy; one sister dead—cause unknown.

Personal history: Had a weak constitution for many years; no rheumatism or syphilis; been a moderate drinker, and much exposed to weather; was an in-patient in April, 1888, for "bad throat and loss of voice." The opinion then was evidently divided between lupus and tubercle of larynx and pharynx. There was some slightly impaired resonance and tubular breathing at both aspices; heart was normal; nose unaffected; had not lost any weight lately, and did not sweat excessively.

Present illness: Six years ago complained of a "lump in throat," which interfered with swallowing and breathing, and for which he became an in-patient. He left the hospital feeling much better and has remained so. His nose commenced to trouble him in December, 1889, with a "running and mattery" discharge, which at times dried up and blocked the passage; this has gradually increased. The redness commenced twelve months afterwards as a red pimple, on the right side, gradually spreading and meeting a similar patch on the left side, which appeared at a later date.

It has always been painful ; voice has always been husky ; of late has been troubled with a slight cough, and a general feeling of "poorliness." Feet swelled and breath became very short about twelve months ago, but those symptoms have gone.

Present state : Has a marked redness and thickening over bridge of nose, the surface of which is quite smooth and unbroken. The swelling is slightly tender and sometimes painful. *Nose* : The choanæ are almost blocked by reddish granular-looking material, with abundance of crusts. There is a sickly-smelling, purulent discharge, but not fætid. *Throat* : Faucial pillars congested. Posterior pharyngeal wall glazed, florid, studded with coral pink nodules, and scored with cicatrices. *Larynx* : Epiglottis eroded, distorted and thickened, hiding the glottis, but the cords can be seen when in position of extreme adduction, which movement is perfect. *Lungs* : No marked changes except at the left apex, where respiratory sounds are accentuated, and vocal resonance is increased. There is no marked dulness on percussion, but distinct resistance. The expansion on the left side is less than on the right. *Heart* : Marked hypertrophy ; apex impulse in fifth outer space immediately below left nipple. There is a double systolic murmur at apex, which is, however, heard all over the thorax. A well-marked systolic thrill is felt over the apex. (Mitral disease.) *Urine* : Normal and plentiful. *Cough* : Short, hacking and irritable. No expectoration.

Was injected twice with tuberculin. March 11th, received 0·002 gramme. March 17th, received 0·003 gramme. He reacted well, and his nasal breathing was considerably improved ; but cough was undoubtedly increased, and the pulmonary signs appearing to be evidently extending, it was decided to forego the tuberculin in favour of potassium cantharidinate after a rest.

His heart symptoms were also increased, there being some *anasarca* of the feet, and a very loud murmur being heard over both sides of chest. These, however, soon diminished under digitalis and rest in bed.

P.S.—April 21st : This patient was unable to endure even the minimum dose of Liebreich's remedy on account of dysuria and vesical tenesmus. The tuberculin injections have therefore been resumed cautiously, and so far with good local effect and no untoward constitutional result.

Case VII. : Sophia R., aged nineteen. Admitted January 18th, 1890, complaining of pain in the throat, with cough.

Family history : Father died of paralysis ; mother living and healthy ; four brothers and sisters living—all suffer with "weak chest."

Personal history : Has always been "weakly," and suffered with winter cough. During the last few months has lost flesh considerably, and been subject to sweating. The cough has of late very much increased, proportionally with pain and difficulty in swallowing. Menstruation regular but profuse.

State on admission : Complains of severe pain in her throat, which runs up to both ears, with great pain and difficulty in swallowing fluids and solids. There is a troublesome hacking cough ; worse at night-time. Has a well-marked hectic flush, and is somewhat anæmic ; is very depressed in spirits, and suffers greatly with dyspnoea on exertion. The

voice is very weak and husky, and polyphonic. Expectoration is scanty, muco-purulent, and occasionally bloody, but there has been no hæmoptysis. Bacilli are not found. Temperature, 2 p.m., 101°; pulse, 88; respiration, 20. *Lungs*: There is slight dulness at both apices. No moist sounds. Vocal resonance and vocal vibrations distinctly increased, with some harsh respiration. Expiration is distinctly audible. The remainder of lungs is free from disease. Expansion on both sides deficient. *Larynx*: Epiglottis thickened and clubbed; arytenoids thickened and congested, also posterior commissure and ventricular bands, to the extent of almost hiding the vocal cords, which are somewhat pink. *Heart*: Action irregular and rapid; sounds accentuated; no murmur; slight dilatation.

Progress: Was injected for the first time on January 29th, '001 gramme of tuberculin, followed by five other injections; gradually increased to '004 gramme. Deglutition was quickly relieved and ceased to cause any pain on February 11th, although dysphagia still remained in a less degree. The voice became quite clear after the second or third injection. The expectoration was very much increased, showing elastic tissue and bacilli. There was some slight hæmoptysis, and several attacks of severe epistaxis. The laryngeal changes were marked. At first the general swelling was increased. On February 5th three necrotic patches appeared on epiglottis and arytenoids, which subsequently ulcerated, and then thickening, diminished. On February 8th the physical signs showed marked changes in both lungs, indicative of consolidation, which have not diminished, but, on the other hand, show a gradual but marked increase. On March 13th cantharidinate of potash, '0002 gramme, was injected, but caused such intense vesical pain that it had soon to be discontinued, and the patient was discharged with some symptomatic improvement.

With the cases shown this evening, I have had under my own care fourteen cases, of which eight have been instances of true tuberculosis affecting both larynx and lungs, five of lupus, and one of tuberculous glands.

I regret to say that up to the present I have not seen any of those visible and marked evidences of improvement in the larynx such as I witnessed at Berlin under the care of Professors Gerhardt and Krause, but symptomatic relief has been almost always constant, and in some cases quite remarkable in the rapidity of its occurrence, in its extent, and in its permanency, even where physical changes have been unfavourable. In one case under my care (H. H., No. 8 in my book) the treatment at the beginning was most promising, for *odynphagia*, which had been extreme, was relieved within thirty-six hours of the first injection, and the patient was able to take food for eight or ten days, when *dysphagia* occurred, necessitating a liquid dietary, but there was never any further pain in deglutition until the time of his death, which occurred fifty days after the last injection.

The condition of the lungs in this case, as diagnosed by auscultation on admission, did not prepare us to expect what we saw at the *post-mortem* examination, the report of which, as well as the specimens, are given by Mr. Wingrave. I am bound to say that these appearances are curiously like what I saw as the result of another autopsy in a case under

the care of Professor Krause, and similar to the conditions so carefully described by Virchow.

In two other cases of laryngeal phthisis there was also symptomatic relief, but treatment was discontinued, as the effect on the general health was discouraging. In the two cases mentioned this evening I have substituted Liebreich's remedy for the same reason, viz., that hectic had increased in intensity, and become more constant.

But in one case—that of a gentleman (case 31 in my book), taken to Berlin, and placed under the care of Professor Gerhardt—I think we may claim that there is distinct cure, for Professor Gerhardt certifies that very slight dulness remains at the seat of former mischief, and that there is vesicular breathing where disease was previously diagnosed both by himself, Dr. Dawson Williams, and Dr. Von Noorden.

I am happy to add that my experience of the diagnostic value of tuberculin has been most satisfactory. My knowledge of the action of Liebreich's remedy is at present too slight to warrant my expressing any definite opinion on the subject. Except in the one case of H. P. (No. IV. in this series), the injections even of minimum doses have had to be discontinued on account of the intense vesical tenesmus occasioned. In several albumen has been manifested.

A CASE OF MALIGNANT TUMOUR OF THE LARYNX TREATED BY INTRA-LARYNGEAL OPERATION.

By Dr. GEORGE STOKER, Surgeon to the London Throat Hospital.

(Read at the Meeting of the British Laryngological Association, Mar. 20th, 1891.)

THE case that I have the honour to bring before the notice of the Association is that of a gentleman, aged sixty-seven. He spent many years in India, and when there enjoyed excellent health. There is no history of any of his relations having suffered from malignant disease. His present—or I trust, his past—trouble dates from five years ago. After an attack of whooping-cough he lost his voice; on two different occasions he sought advice in reference to this hoarseness, and, curious to relate, two days after each consultation he had a fit of coughing, when his voice suddenly and almost entirely returned. The relief was only temporary, and when I saw him in May last he was nearly aphonic. His general health was excellent; he had no pain or dyspnoea, and he was not losing flesh. There was no external swelling or enlargement of glands. He had some cough, usually in the morning, which was, I believe, due to chronic bronchial irritation; its existence dated from long before the hoarseness began.

On examination I found the pharynx deeply congested and relaxed, and the uvula swollen and elongated. There was general congestion of the

larynx, and a greyish-coloured, glistening, pear-shaped tumour was seen, springing from the anterior part of the upper surface of the left vocal cord, and extending as far back as the arytenoid cartilage on the same side. The tumour was pedunculated, and its attachment occupied about the anterior fourth of the cord.

The left vocal cord was very red and thickened, and the right cord was also congested. On phonation the tumour became apparently tightly distended, and projected across the glottis, which accounted for the hoarseness, but during respiration it lay quietly on the vocal cord, which, I presume, accounted for the absence of dyspnoea. The vocal cords moved normally, and there was no ulceration, and no blood or matter was visible.

I believed the growth to be either cystic or adenomatous, but the age of the patient, the persistent nature of the congestion, and the extreme irritability of the larynx, etc., aroused some suspicion in my mind as to the possibility of its being of a malignant nature. There was extreme irritability of both pharynx and larynx, and even after applying a thirty per cent. solution of cocaine it was difficult to explore the larynx. On this account a great many sittings were necessary to train the larynx. A portion of the growth was removed with the galvano-snare, and submitted to Mr. Shattock for examination. The following is his report: "I have carefully examined the sections of the laryngeal tumour, and must pronounce it to be a horny carcinoma." The sections were also examined by Mr. Stewart, and he said, "The growth seems to be epitheliomatous, although not of the usual character."

The question at once arose as to what the future treatment should be. Mr. Butlin saw the patient in consultation, and it was decided that no external operation was advisable, for the following reasons:—

1. The age of the patient.
2. The nature of the growth.
3. The unfavourable results of external operations on the larynx; and, "last, but not least," the patient utterly declined to consent to any external operation.

The tumour was removed in several pieces with the galvano-snare, and the portions submitted for microscopic examination, and on each occasion the appearances were the same as those seen in the first portion examined. The free part of the tumour having been entirely removed, the pedicle and site of attachment were freely cauterized with galvano-cautery; this naturally caused considerable inflammation and swelling, but when these conditions subsided no discomfort remained, and the voice became quite normal.

I saw the patient on October 8th, 1890, and the following are the notes made in reference to my examination: "Voice completely restored, indurated base has contracted, left vocal cord is still congested, right vocal cord fairly normal, and general surface of laryngeal mucous membrane is healthy, general health is excellent, and weight maintained." In answer to an enquiry made on March 10th, 1891, as to the progress of the case, I received the following reply: "As you wish to know what progress I am making, I am happy to say that my answer

"must be 'none.' I seem to have no knowledge of ever having had a "throat, or an obstruction of the vocal cords."

I saw the patient on March 14th, 1891; I found the left cord deeply congested, and somewhat thickened, the right cord was quite normal. There was no sign of any recurrence of the growth; the voice was clear and natural. So far, the results are most gratifying, but one can hardly believe that there will not be a recurrence of the growth. It is now nine months since the operation was performed, and should the growth recur I trust by the use of the galvano-cautery to keep it in check, and prolong the patient's life in comfort.

I venture to draw attention to the following points:—

1. As to diagnosis.

- (a) The age of the patient.
- (b) The persistent character of the congestion.
- (c) The microscopic examination. It may be sometimes negative, but can never be regarded as being decisive; as positive evidence it is conclusive.

2. With regard to treatment.

- (a) Considering the age and health of the patient, and the advisability in such cases of intra-laryngeal operations.
- (b) The necessity of prolonged and careful training, in order to insure accuracy and certainty, and to avoid injuring the larynx or removing inoffending structures.

3. The method of operation.

- (a) The advantages of cocaine and the necessity of using a sufficiently strong solution.
- (b) The advantages of the galvano-cautery or snare over the forceps, &c.
 - A. Is much less bulky and does not obstruct the view.
 - B. Is a gentle method and renders force quite unnecessary.
 - C. Accompanied by less bleeding.
 - D. Destroys roots and growth.
 - E. Is easily bent according to the situation of the growth.

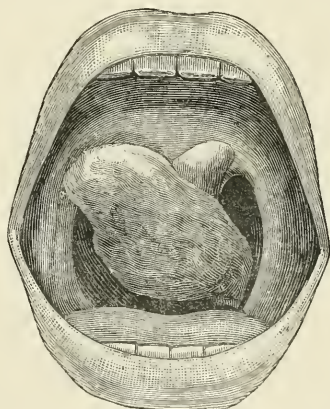
In conclusion, I venture to express the extreme gratification I feel at the progress and prospects of this case. In doing so I "lay no flattering unction to my soul." I know there are many who could have accomplished what I did, better and in a shorter time; I only deem myself most fortunate in having the opportunity. I am certain that no operator was ever more favoured than I was in reference to the patient with whom he had to deal, and it is but just to say that I attribute much of the success that attended my efforts to his courage, determination, and endurance.

AN UNUSUALLY LARGE NASO-PHARYNGEAL POLYPUS IN A GIRL AGED FIFTEEN.

A Note from the Clinic of Dr. NORRIS WOLFENDEN, the Throat Hospital, Golden Square, London.

M. S., a tall, well-grown girl, fifteen years of age, applied at the hospital for relief from a swelling which she complained of at the back of the throat ; with it she experienced some little difficulty in swallowing, and had a nasal intonation.

Through the open mouth a large mass of tumour was seen, blocking up, more or less completely, the pharynx, hanging a considerable distance below the soft palate, nearly resting upon the tongue, pressing the uvula upwards and to one side, and at the right side projecting very considerably into the oral cavity. In appearance it was smooth, pale-red, and solid-looking. Digital examination of the naso-pharynx was difficult, on account of the space being occupied so fully with the tumour. At first it was impossible to pass the finger up to the posterior nares ; at a latter examination, however, it was easily determined that the growth arose by a long, broad pedicle from the left inferior turbinated body.



The history of the case, given by the patient herself, was as follows : When eight years of age she had measles, and a slight discharge from the nose had existed ever since. A year previously to this visit she had been treated at this hospital for multiple polypi of the nose, and the growths were then removed. Her attention was first called to her present condition about ten months previously, when she observed, by standing before a mirror and looking into the throat, that a large growth existed. For a period of about four months it seemed to disappear, and she could never see it ; then it became constantly visible, though varying from time to time in size. Four months ago she first became aware of obstruction

to nasal breathing. Although the growth hung down in contact with the tongue so as to irritate the latter, she had no cough. The growth never bled.

There was no difficulty in removing the growth on October 31st by passing the wire of the Jarvis snare through the nose, hooking it with the finger in the naso-pharynx, drawing down into the mouth, encircling the polypus, and drawing tight as near the root as possible. The girl's naso-pharynx was anæsthetized with ten per cent. cocaine.

It proved to be an ordinary myxo-fibromatous polypus, springing from the posterior end of the left inferior turbinated body, conical shaped, and, as these polypi always have been in my experience, dense and fibrous in its lower pendant portion, and myxomatous at its upper portion. The only remarkable feature about it was the size of the polypus, which was unusual for a child so young.

A second mass of polypus was removed from the nares four days afterwards by Mr. T. M. Rees, the resident medical officer, and the girl was discharged cured five days afterwards, after thorough cauterization of the inferior turbinated body.

I have removed a great many such growths with the Jarvis snare—growths which are, indeed, common enough—but I have only met with one larger than this—a growth similar in structure and origin, which hung down upon the epiglottis, was four inches in length and weighed nine drachms—and though I have met with cases of polypi of the nose in quite young children, as others have done, I think that a growth of the size attained in this instance is quite a rarity in such a young subject as a girl of fifteen.

NEW INSTRUMENTS, THERAPEUTICS, &c.

Osborne.—*Tongue-Depressing Insufflator.* "Brit. Med. Journ.," Oct. 11, 1890. An illustrated description of an instrument suitable for the double purpose. Sold by J. M. Richards, 46, Holborn Viaduct, London, E.C. (Dr. Alexander Duke describes a modification of this in the "Brit. Med. Journ." of Nov. 15, 1890. *Hunter Mackenzie.*

Rideal, Arthur H. (Scarborough).—*A Ready Inhaler (Illustrated).* "Brit. Med. Journ.," Nov. 22, 1890.

"TAKE an ordinary funnel, and in it loosely pack some cotton wool. On this sprinkle the medicament, and then tie a piece of gauze or muslin to keep the wool in position. Invert the funnel over some hot water contained in a breakfast cup or other vessel (according to the size of the funnel)." *Hunter Mackenzie.*

Schwartz (Gleiwitz).—*New Instrument for Puncture of the Antrum of Highmore.* "Zeitschrift für Ohrenheilk.," Bd. 21, Heft 3, 4.

MODIFICATION of Krause's instrument.

Michael.

Lamann (St. Petersburg).—*Use of Accumulators for Laryngological Purposes.*

"Monats. für Ohrenheilk.," 1891, Nos. 2, 3.

DESCRIPTION of the different forms of accumulators, and recommendation to use them for laryngo-cautery. *Michael.*

Michael, Aerztlicher Verein in Hamburg. Meeting, Feb. 3, 1891.

MICHAEL shows an improvised covered *ferrum candens*, which can take the place of the galvano-cautery in the treatment of diseases of the nose and pharynx, and can also be used for the treatment of diphtheria as recommended at the last meeting by Hagedorn. The instrument consists of a laryngeal handle in which a knitting needle is fixed. The needle is to be heated to a red glow over a gas or spirit-lamp, and then covered with a wooden tube. So covered, the instrument can be introduced and applied to the affected place. There the tube is retracted, the place burned, and then the needle recovered; thus the neighbourhood cannot sustain any damage. The instrument is to be further improved.

Michael.

Draispul.—*Electrolysis in Rhino-Laryngeal Surgery.* "Vratch," 1891, Nos. 4, 6, 8, &c.

THE author investigated at the polyclinic of Prof. Schnitzler, at Vienna, the effects of electrolysis in different diseases of the nose, throat and larynx, and came to the conclusion that electrolysis acts very slowly, especially if we have to destroy considerable portions of tissue. In one case of a partial polypoid degeneration of the middle turbinated, he had to give twenty sittings of fifteen to twenty minutes each, with a current of fifteen to twenty milliampères until the bone reached its normal size. On the other hand, in cases where the writer had to destroy small portions of tissue, and especially where the tissue was rich in vessels or fluids, good and quick results could be obtained. These are cases of chronic rhinitis with marked congestion of the mucous membrane, sometimes to such an extent that the nose becomes obstructed. Good results were also noted in cases of large granulations in the pharynx, and in one case of a small angioma on the posterior wall of the pharynx, which was destroyed painlessly in one sitting, not leaving even any noticeable cicatrix. As in some cases the results after treatment with electrolysis were more durable than after the galvano-cautery, the author tried electrolysis in three cases of tubercular disease of the mucous membrane of the nose, having previously scraped the diseased parts and thus leaving to be destroyed with the current only the basis of the tumours; the results were, however, in all the cases unfavourable. A good result was noticed in one case of broad-based angio-sarcoma occurring on the septum of the nose; the tumour was removed with the galvano-cautery, and the base destroyed by a few sittings of electrolysis. Some weeks after, the place occupied by the tumour was covered with an apparently healthy cicatrix. In one case of ranula, after some ineffectual attempts at treatment, a favourable result was reached only after a change in the manner of using electrolysis, which consisted in moving the handle of the electrode during the operation, and so causing the ends of the needle to come in contact with different parts of the internal superficies of the

tumour, and consequently effecting a more complete destruction of the secreting membrane. The application of electrolysis in the larynx is very difficult; in spite of repeated brushing with a ten per cent. solution of cocaine the author could not keep his instrument in the larynx longer than one to two minutes, after which time the patient began to vomit, and in order to continue the operation it was necessary to repeat the brushing. In all the cases where the application of electrolysis was made to the larynx the results were most insignificant. In one case, where a small tubercular tumour on the inter-arytenoid mucous membrane had to be destroyed, this could not be accomplished in twelve treatments of thirty to forty minutes each. Only in one case of a globular tumour occurring in the front commissure of the larynx just under the vocal cords, most probably of a tubercular character, a noticeable diminution was brought about after several treatments. The best results, as other writers report, were obtained in destroying warts. A lady with one wart on the nose and multiple warts on the hands was freed from them in three sittings so completely that not even a scar was left on the nose.

Besides the description of the results reached by the author himself, there is further a large part of the paper devoted to a critical account of the literature of this question as well as of the electric apparatus and instruments used by different investigators. *E. Draispul.*

Murrell (London).—*Guaiacum*. "Med. Bulletin," Jan., 1891.

OUR old friend Guaiacum, tried and trusted in the treatment of tonsillitis, is believed by Dr. Murrell to act mainly as a laxative or purgative. He gives thrice daily one or two drachms of an electuary, consisting of ten grains of guaiac-resin to a drachm of honey, or to half an ounce of malt extract. He thinks that a smaller dose might be sufficient if triturated with cream of tartar or sugar of milk. In the doses mentioned "it seems capable of producing the maximum of inconvenience and discomfort, and gives unlimited satisfaction. The purgative effect is very pronounced, and in one case the patient had fifty-six evacuations in the "week." (*De gustibus non est, &c.*) *Dundas Grant.*

Gleitzmann.—*Experience with Trichloroacetic Acid in Two Hundred Cases of Affections of the Throat and Nose, with demonstration of Instruments.* "Medical Record," Mar. 14, 1891.

THE author uses Merck's preparation exclusively, and great care must be taken to prevent deliquescence of the crystals. Flexible aluminium rods of various shapes and excavated at the distal end are employed in order to localize its action; the acid being placed in the excavation.

The pharynx needs no anæsthetic previous to cauterization; a ten per cent. solution of cocaine is used in treating the nose, and a twenty per cent. solution in laryngeal operation, to prevent spasm. The eschar produced is white, smooth and usually dry, the inflammatory swelling is very slight, and the action is more strictly limitable than in the case of other caustics.

It was used in 170 cases of hypertrophic conditions of the nose with good results, also for removing the lingual tonsil, faucial tonsil, and to

granules on the pharynx. It appears to be of little value in cartilaginous spurs of the septum. It is useful in laryngeal polypoid excrescences, and it is thought by the author that it may with advantage be employed in phthisical conditions of the larynx. He considers it tedious in tonsillar hypertrophy, and seventy-four applications had to be made in twelve cases of enlarged lingual tonsil. It was useless in stenosis of the nostrils, tupelo tents being preferable. The eschar generally drops off in from two to five days.

Barclay J. Baron.

Willoughby, E. F. (London).—*Suggestions on the Antagonistic Action of Cocaine and Chloral.* "Lancet," Feb. 14, 1891.

IN himself and several of his patients Dr. Willoughby observed, after the use of cocaine, as nasal injection or throat pastille, a condition of insomnia, *requiring more than the usual dose of chloral to counteract it.* One lady lay "wide awake" all night without feeling tired next day, having the previous evening sucked several cocaine pastilles (each $\frac{1}{12}$ grain) and gone to bed with two more in her mouth. The writer sees in cocaine a probable antidote for chloral-poisoning, and suggests experimental investigation of the subject.

Dundas Grant.

Parker, R. W. (London).—*The Prevention of Cocaine Poisoning and Resorcin.* "Brit. Med. Journ.," Aug. 30, 1890.

THE author has found that cocaine and resorcin form a valuable combination, in which the individual action of each drug is enhanced, and no toxic symptoms ensue, even after a free use of the drugs. Resorcin, which is one of the phenol series, is said to be antiseptic, preservative, astringent, and hæmostatic. After a few moments it lessens sensibility, and has a vigorously contractile action on hypertrophied mucous membrane.

Hunter Mackenzie.

— *The Art of (not) Catching Cold.* "Provincial Med. Journ.," Feb. 2, 1891.

IN a racy article on this subject, the writer points out the infrequency with which exposure to cold and wet or damp sheets, *without the existence of other factors*, gives rise to cold. Some constitutional dyscrasia or disease (*e.g.*, Bright's disease) may be at the bottom of the mischief. Over-wrapping in general, alcoholic stimulation, cold bathing, imperfect protection of the abdominal region as compared with the chest, neck wrappers, &c., are joco-seriously impeached. On the other hand, light clothing, with exercise, avoidance of alcohol, morning *warm* bath, hot water-bottle in bed, &c., are recommended by the genial and (we take it) not very juvenile monitor.

Dundas Grant.

Biegert (Haguenau in Alsace).—*The Examination of Sputum for Bacilli.* "Lancet," Feb. 7, 1891, p. 343.

A TABLESPOONFUL or more of the sputum is well stirred up with a glass rod. "Some" of it is mixed with two tablespoonsful of water, and four to eight drops of solution of caustic soda (liq. sodæ?) according to the density of the sputum. This is then boiled in a shallow cup, stirred all the while, and four to six tablespoonsful of water are added, till a pretty thin fluid mass is produced. The whole is poured into a tapering glass,

and allowed to stand for two hours, by which time the formed particles and bacilli will have gravitated to the bottom. The fluid is then poured off, and a little of the sediment is taken out with a platinum needle and rubbed on a cover-glass. When the preparation is dry, it is passed through a flame, stained with carbolized solution of fuchsine, and then bleached with 25 per cent. sulphuric acid, the bacilli remaining red. [The process of concentration above described may prove a useful supplement to the ordinary simpler methods in cases of clinical doubt, when a negative bacterioscopical result has been obtained.] *Dundas Grant.*

Dixon, Samuel G. (America).—*Possibility of Checking the Tubercular Process in Man by the Agency of a Metabolic Product of the Tubercle Bacillus.* "Med. News," Jan. 17, 1891.

By submitting a mass of tuberculous tissue to the action of ether, and to a saturated solution of sodium chloride, and then filtering through a Pasteur filter, Dr. Dixon got an active principle, which, when injected subcutaneously into tuberculous animals, caused a febrile and local reaction similar to that produced by Koch's fluid. *Dundas Grant.*

Davy, Henry (Exeter).—*Koch's Fluid. Fehleisen's Experiments on Lupus with Pure Cultivations of the Micrococcus of Erysipelas.* "Lancet," Feb. 14, 1891.

DR. DAVY calls attention to Fehleisen's paper in the Sydenham Society's volume, "Micro-parasites in Disease," published in 1886. As the result of inoculation, erysipelas was produced and the known curative effect of that disease on lupus brought about. The question is raised by Dr. Davy as to whether the action of Koch's fluid on lupus has any specific relation to the tubercle bacillus. *Dundas Grant.*

Hericourt and Richet.—*Inoculation of Dog Serum as a Remedy for Tuberculosis.* "Lancet," Feb. 7, 1891, p. 343.

THE dog being refractory to tuberculosis, it is assumed that there is something in the serum antagonistic to the bacillus. Experiments on rabbits were instituted with confirmatory results, and the plan of treatment was then carried out on four phthisical men. In two, there was laryngeal phthisis, and under the treatment the swollen epiglottis, which was very swollen and motionless, became much reduced in volume, and regained its mobility, the distressing agony occurring during deglutition disappearing. The inoculations (dose from 1 to 4 c.c. every three or six days) are followed by neither local nor general reaction. [We presume that serum from blood drawn under aseptic circumstances from a thoroughly healthy animal is used. In any case the danger—to the kidney, &c.—following the injection of corpuscle-holding blood appears to be avoided.] *Dundas Grant.*

DIPHTHERIA, &c.

Thorne Thorne (London).—*Diphtheria; its Natural History and Prevention.* 3rd and 4th Milroy Lectures. "Lancet," Mar. 7 and 14, 1891—(continued).

THE important influence of school attendance was further shown by the Coggeshall and Pirbright outbreaks in 1877 and 1883, and "it seemed " that the mere bringing together of the children was responsible for " imparting to the throat affection the serious specific quality in question." Milk in connection with the causation and diffusion of diphtheria was discussed in the fourth lecture. In one outbreak a large percentage of the affected patients had derived their milk from the same dairy—their houses being actually in the best possible sanitary condition—and there was observed a special incidence on people who partook largely of uncooked milk. Dr. Thorne thought there was a special infectivity attaching to cream, but this was shared by the skim-milk, and was therefore apparently favoured by the *storage* which allowed of the growth of the specific organisms. This was confirmed by the results of Klein's experiments, which showed that the true diphtheria bacillus (Loeffler's) would multiply at the ordinary temperature of the air. The cows were found in all instances to have only the most "trivial" ailment. Further researches of Dr. Klein (to be published in Dr. Buchanan's report to the Local Government Board), however, proved that the inoculation of cows with the diphtheria membrane produced in them a "trivial" ailment identical with that observed in the outbreaks mentioned. Cats acquired diphtheria from their milk, and the true bacillus was found in lymph from small vesicles on the udders. [The difficulty in recognizing diphtheria in cases of "sore throat," the dangers attending aggregation of children, the risks incurred in consuming uncooked milk from cows suffering from "trivial" disorders, as dwelt on in these valuable lectures, all point their own moral.]

Dundas Grant.

Neumann.—*Etiology of Diphtheria.* "Archiv. für Kinderheilk.," Band 12, Heft 5 and 6.

REPORTING review.

Michael.

Masing. Verein St. Petersburger Aertze. Meeting, Oct. 30, 1890.

SPECIMENS from a child who died from *erythema nodosum* following a nearly cured nasal diphtheria were exhibited.

Michael.

Escherich (München).—*Bacteriological Researches in Diphtheria.* Festschrift für Henoch.

IN fifteen cases of diphtheria which were examined, the author found Loeffler's bacillus. In cases of catarrhal angina it was not found, but in some cases of diphtheria without distinct membrane.

Michael.

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Labell, E. P. (Freiburg-im-Breisgau).—*A Suction Instrument for Diphtheria.* "Brit. Med. Journ.," July 19, 1890.

AN illustrated description of an apparatus for clearing the wind-pipe of membrane, &c., in diphtheria. *Hunter Mackenzie.*

Ruffer, M. A.—*Preliminary Note of the Process taking place in the Diphtheritic Membrane.* "Brit. Med. Journ.," July 26, 1890.

THE author thus summarizes his bacteriological and histological researches :—

1. The bacilli of diphtheria are present in the most superficial part of the membrane only—that is, in a place where they are well within reach of medicinal agents.

2. In the diphtheritic membrane there is an active struggle taking place between the amœboid cells in the membrane and the micro-organisms.

3. The reason why the bacilli do not actually penetrate into the tissues is probably that as soon as they try to do so they are arrested by the amœboid cells present in the diphtheritic membrane.

Hunter Mackenzie.

Browne, Lennox (London).—*A Case of very Slight Diphtheria succeeded by Severe Paralysis.* "Brit. Med. Journ.," July 26, 1890.

REFERRING to Dr. Gayton's case (*vide infra*), Mr. Browne writes that "it is interesting in that it enforces the fact, well-known to specialists, that "faucial diphtheria in the adult is frequently so slight that the diagnosis is "only confirmed on exhibition of post-diphtheritic neuroses, and it is this "circumstance which renders it important not to lightly dismiss the sore "throats of nurses and parents in attendance on patients of tender age."

Hunter Mackenzie.

Gayton, W. (London).—*A Case of Very Slight Diphtheria succeeded by Severe Paralysis.* "Brit. Med. Journ.," July 19, 1891.

AN attack of diphtheria in a woman aged forty-one, so slight as to be considered a simple sore throat, was followed by complete paralysis and anæsthesia of the arms and legs, paroxysmal convergent strabismus of both eyes, with loss of power of accommodation, paralysis of the palate, and attacks of syncope. The temperature meanwhile was persistently sub-normal, ranging from 95·4° to 98° Fahr. Treatment consisted in free stimulation on account of the threatened cardiac failure, and the free administration of iron and strychnine. Recovery. *Hunter Mackenzie.*

Davidson, James T. R. (Buenos Ayres).—*Notes on Diphtheria in Animals and Man.* "Brit. Med. Journ.," Oct. 25, 1890.

THE author is of opinion that the epidemic of diphtheria in the above city, in 1889, was "due to the presence of animals, especially hens and horses, in yards without any pavement, or hardly paved." In support of his contention, he refers to the fact that in the French, German, and Hungarian armies there are three times as many deaths from this disease amongst the cavalry than amongst the infantry. He considers his facts a strong testimony to the truth of the theory which ascribes diphtheria in animals to the presence of a damp soil, and diphtheria in the human

subject to contagion from animals so infected. [This paper is adversely criticized in the *Veterinary Journal*, so far as horses being subject to diphtheria is concerned.]
Hunter Mackenzie.

Taylor, Michael W. (London).—*Causes of Diphtheria in Animals and in Man at Buenos Ayres.* "Brit. Med. Journ.," Nov. 1, 1890.

IN reference to the article by Dr. Davidson (*vide supra*), the author points out that it is confirmatory of the views already expressed and published by him "On the Fungoid Origin of Diphtheria" ("Brit. Med. Jour.," July, 1881); "Diphtheria in connection with Damp and Mould Fungi" (Transactions of the Epidemiological Society, 1887).

Hunter Mackenzie.

Kennedy.—*Action of Sulpho-Calceine in Diphtheria and Catarrh.* "The Medical Bulletin," Mar., 1891.

THIS is an account of three cases of diphtheria successfully treated by swabbing the affected surface with "sulpho-calceine" (Reed and Carnrick) every half-hour, and also gargling with a solution of it—half an ounce to half-a-pint of water. The author believes it to be a specific for diphtheria, and to be of much use in nasal catarrh with anosmia. *Barclay J. Baron.*

Loeffler (Grafswald).—*Therapy of Diphtheria.* "Deutsche Med. Woch.," 1891, No. 10.

THE author believes that a natural therapy of diphtheria can only be found by the study of the effect of different medicaments on the cultures of the diphtheria bacilli. Concerning the therapy, we must try to prevent the development of the bacilli, and, secondly, to destroy the micro-organisms embedded in the pseudo-membranes. The author has studied the effect of a great number of medicaments on the cultures in blood serum. Of those, the following gave the best results:—Solution of sublimate 1:10,000 destroyed the bacilli; by 1:1000 the cultures were destroyed. Solutions of cyanide of mercury destroyed the bacilli in solution of 1:10,000; cultures 1:1000. Nitrate of silver had effect in solutions of 1:1000. Permanganate of potash 1:100 and chlorate of potash 1:20 were without effect. Iodine trichloride was effective in solution of 1:2000. Absolute alcohol and ether destroyed the bacilli, but not the cultures. Chloroform water was very effective. Carbolic acid destroyed the bacilli in solutions of 3 to 4 per cent.; the cultures in 5 per cent. Salicylic acid was of less effect. Also many ethereal oils were tried, and found more or less effective. The author concludes: for prophylactic use gargling with solution of sublimate 1:10,000, or aqua chloroformi. The steam of orange, citron, eucalyptus oil, etc., may be applied by means of Feldbausch's inhalers. For treatment of the disease, gargling with sublimate 1:1000; carbolic acid 3:100. Turpentine is also recommended.

Michael.

Escherich (Graz).—*Indications for Intubation in Diphtheria.*—"Wiener Klin. Woch.," 1891, Nos. 7, 8.

A PATIENT, aged two and three-quarter years, with laryngeal diphtheria, treated by intubation and cured. The author reports the current literature

on intubation, and speaks of the different advantages and disadvantages of the method. Concerning its application in practice, he concludes :—

1. The value of the method cannot be judged of by the percentage of cures obtained by the exclusive application of intubation or tracheotomy. The method must individually be selected for every case, and according to eventualities changed for another.

2. Intubation can cure diphtheritic dyspnœa in a similar manner to tracheotomy. It will not do away with tracheotomy, but only replace it in a few cases.

3. The advantages of the method are the easy *technique*, the avoidance of narcosis and wound. Its dangers consist in decubitus, "schluck pneumonic," cough from irritation, difficulty in the expectoration of membranes and secretion, and relatively insufficient aeration of the lungs.

4. Therefore, if the lungs and bronchial tubes are already affected, if the patients are weak naturally or from prolonged illness, or if there is sepsis, tracheotomy must be preferred.

5. The best cases for intubation are primary diphtherias of the larynx, without sepsis or collapse.

6. In these cases also tracheotomy must follow as soon as the disease becomes more severe and respiration insufficient.

7. Intubation also can be applied provisionally in case of need.

Michael.

Ranke (München).—*Intubation in Cases of Impossibility of Removing the Canula in Cases of Diphtheria.* Festschrift für Prof. Hensch.

IN cases of granulation and stenosis, and in cases of chondritis inferior hypertrophica, cure is obtained by application of O'Dwyer's tubes.

Michael.

Schwalbe and Rosenberg.—*O'Dwyer's Intubation in Diphtheritic Laryngeal Stenosis.* Berliner Med. Gesellschaft. Meetings, Mar. 11 and 28, 1891.

SCHWALBE reports on the results up to now obtained by intubation, and shows the instruments and their mode of application. Of thirteen cases, only ten can be regarded; of those, nine died, and only one was saved. He resumes:—Advantages of the method are, the short time of its performance, the absence of a wound, and with it the impossibility of loss of blood and wound-infection, the respiration by the natural passages. Its disadvantages are, the dangers of after-treatment, the difficulty of feeding, the necrosis from pressure, and its consequences, the possibility of events leading to sudden death. The disadvantages are much more weighty than the advantages. The statistics are not so good as those of tracheotomy, therefore in the author's hospital the method has been relinquished.

ROSENBERG believes that intubation is better than Schwalbe makes out. If the children are fed with the head hanging down, or by enemata, it is possible to facilitate the feeding. Pneumonia from swallowing has not yet been observed. It is very necessary that only well-fitting tubes be applied; such will not produce decubitus. If the time is too short, or if tracheotomy is not allowed, intubation should

be performed. Very good results are obtained in chronic stenosis, syphilis, tuberculosis, granulations, paralysis of the abductors, and spasm of the glottis.

Michael.

Ganghofner (Prag). — *Treatment of Whooping-Cough with Antipyrin.*
Festschrift für Henoch.

THE author has treated ninety-three cases, and recommends the medicament.

Michael.

NOSE AND NASO-PHARYNX.

West, Samuel (London). — *On the relation of Asthma to other Diseases.*
"Brit. Med. Journ." Nov. 15, 1890. Med. Soc. of Lond., Nov. 10, 1890.

THE author referred to the association between affections of the nose and asthma, the discovery of which, he said, constitutes the greatest advance in our knowledge of the pathology of therapeutics for many years past. Dr. Thorowgood mentioned a case in which the removal of nasal polypi failed to effect a complete cure, although it brought about marked improvement. Dr. De Haviland Hall had been struck by the number of cases in which relief was procured by treating co-existing disease of the nose, but he had not met with a single case of complete cure. There was certainly turgescence of the nasal mucous membrane during the asthmatic attack, and he inferred that the same condition was present in the nasal mucous membrane. Dr. Semon believed that too much importance was attributed to nasal affections as causes of asthma. He could not distinguish between those in which treatment directed to the nose was likely to prove beneficial, and those in which it would prove ineffectual, and the latter constituted the majority. Assurances of cure after nasal treatment could not be given to patients, even where the concomitant nasal affection was most marked. Dr. Theodore Williams directed attention to a class of cases in which there was a history of some prior affections of the lungs. He believed that pulmonary affections must act by leaving some structural changes behind, and in some cases this might be enlargement of the bronchial glands.

Hunter Mackenzie.

Loeb (St. Louis, U.S.A.). — *How a General Practitioner may treat Chronic Atrophic Rhinitis.* "Med. News," Jan. 24, 1891.

CLEANLINESS and stimulation. The former, initiated by free spraying with Dobell's solution (or the following :—℞ Sodii bicarb., sodii bicarb. āā ʒij, listerine or "katharmon" ʒj., aq. ad. ʒviij. m. Sig. Nosewash), is effected by thorough wiping of the nasal cavities by means of a pledget of wool twisted on a wire. Stimulation is to be effected by such a formula as this :—℞ Menthol, gr. x., liquid albolene fʒj. m. Sig. spray for the nose. The amount of menthol may be increased. Thymol (gr. x. ad. ʒj.), or eucalyptol (m. x. ad. ʒj.) may be substituted for the menthol. The patient must snuff up

the first lotion four times a day, and use the spray each time. [A fair routine treatment, to which one would certainly add the plugging of each nostril on alternate nights with cotton-wool, impregnated with some antiseptic, such as iodoform, menthol, or eucalyptus. A snuff containing one part of menthol to eight of some bland powder—spermaceti, starch, sugar of milk, boracic acid—is a convenient form of stimulant.—*Rep.*] *Dundas Grant.*

Johnston, Samuel (Baltimore).—*Foreign Bodies in the Nose versus Nasal Catarrh.* "Med. News," Jan. 17, 1891.

SEVERAL cases illustrating the possibility of error in diagnosis. Advisability of careful use of an anæsthetic in most cases of removal of foreign body from nose in children. As a preliminary the application of cocaine is recommended, followed by a spray of liquid albolene. Gross's extractor or wire-loop for extraction. Subsequent washing out of the nose twice daily with a weak solution of permanganate of potash.

Dundas Grant.

Ball (London).—*A New Method of Nasal Irrigation.* "Lancet," March 14, 1891.

A WIDE-NECKED bottle with a bung-cork through which pass two tubes, one reaching to the bottom, the other only a short distance through the cork. The former has attached to it a flexible tube with a tip to fit the nostril, the latter a glass prolongation which can be held between the patient's lips. Fluids are placed in the bottle, and when the patient blows, puffing out his cheeks, the fluid enters the nose. [This instrument, devised by Dr. Pins, of Vienna, is certainly compact, and, if judiciously employed, of great utility, but it appears to have all the dangers of any anterior nasal douche, the tip of which fills the entrance of the naris. In the Reporter's opinion, the point of a nasal douche apparatus—not a spray—should be so small as to allow of the freest possible reflux, in case of exit, through the opposite nostril or otherwise, being in the least degree impeded.]

Dundas Grant.

Proskauer (Nürnberg).—*Embryos of Oxyurides in the Nose.* "Zeitschrift für Ohrenheilk.," Bd. 21, Heft 3, 4.

IN the secretion of the nose of a patient, aged thirty years, a large number of embryos of oxyurides were found. Description of the embryos and report of the literature. The important paper of Joseph on this subject is not mentioned.

Michael.

Jacobi (New York).—*Partial and Universal Chorea caused by Nasal Reflexes.* Henoch's Festschrift, Berlin, 1890.

THE author has frequently observed convulsive movements of the facial muscles in children. All these children had inflammation of the nasal, nasopharyngeal and pharyngeal mucous membrane. He believes that the nervous symptoms are determined by the chronic irritation of the terminal fibres of the trigeminal nerve.

Michael.

Alvin (St. Etienne). *The Arrest of Nasal Hemorrhage by means of very Warm Water.* "Loire Medicale," Oct. 15, 1890. "Arch. de Laryng.," Feb., 1891.

CONTINUOUS irrigation with water from at least 53° (127° Fahr.) even up to 60° (140° Fahr.).

Dundas Grant.

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Wood (Arkansas).—*McDowell's Method of Controlling Epistaxis.* "Med. Rec.," Jan 17, 1891.

(AN improvised substitute for Cooper Rose's well-known intra-nasal plug.)
Dundas Grant.

Peltesohn.—*Mimetic Spasm cured by Treatment of the Nose.* Laryngol. Gesells., Berlin, Jan. 16, 1891.

A PATIENT, aged twenty years, with *tic convulsif* since his fourteenth year, cured by removal of a polypous tumour of the left inferior turbinated body. Another patient treated by removal of a nasal (septal) "spina" is not cured of his mimetic spasm.
Michael.

Preobraschensky (Moskau). — *Contribution to the Histology of the Regio Olfactoria.* "Wiener Klin. Woch.," 1891, No. 7.

CAREFUL histological and embryological researches on the development of the regio olfactoria of the hen. Must be studied in original.
Michael.

Bergmann.—*Pathology and Therapy of the Catarrhal Diseases of the Nose and its Accessory Cavities.* Gesellschaft Praktischer Aerzte zu Riga. Meetings, Dec. 19, 1890, and Jan. 16, 1891.

NOTHING new.

Michael.

Kurz.—*A Simple and Easy Method of Extracting Nasal Polypi.* "La Gazette Médicale de Montreal," Jan., 1891.

A BELLOCQ'S canula is passed through the nose, a stout thread of waxed silk, in which are tied three pieces of sponge of increasing size, and some distance apart. The first should be large enough to rub slightly against the posterior naris, and the polypi are either torn off by it, or those pieces of sponge that follow it.
Barclay J. Baron.

Carpenter.—*Nasal and Pharyngeal Manifestations of Syphilis—Results and Treatment.* "Weekly Medical Review," Jan. 10, 1891.

THE treatment suggested is cleansing—listerine, with or without alkalies, being recommended; caustic applications for ulcers; cocaine to soothe the pain; and iodoform, eucalyptus oil, menthol, carbolic acid, etc., to promote healthy action. Goodwillie's knives and saws for removing dead bone are praised, and of course the usual constitutional treatment must be adopted.
Barclay J. Baron.

James, W. D. (Sheffield).—*Syphilitic Ulceration of the Nose.* "Brit. Med. Journ.," Nov. 15, 1890; Sheffield Med. Chir. Soc., Nov. 6, 1890.

EXHIBITION of a patient the subject of syphilitic ulceration of the outer surface of the nose, also of palate and pharynx. The unusual situation, and a superficial similarity of appearance to lupus before the scabs had been removed, were commented on.
Hunter Mackenzie.

Beermann (Riesenbeck).—*Primary Tuberculosis of the Nasal Mucous Membrane.* Inaugural Dissertation. Würzburg, 1890.

A HEALTHY lady, thirty-four years old, had on the mucous membrane of

the right nasal introitus a round spot covered with nodules of the size of the head of a pin. Operation ; four weeks later, recurrence ; cauterization. In the pieces removed tubercle-bacilli were found. *Michael.*

Pavloff, Professor Evgeny V. (St. Petersburg).—*Case of Rhinoscleroma.* "Meditzinskoïe Obozrenië," 1891, No. 2, p. 126 ; and "Vratch," 1891, No. 2, p. 52.

THE author relates a case of rhinoscleroma in a woman, which is still under his observation. The disease commenced about six years ago, in the form of a deep nodule situated in the right anterior arch of the soft palate. The new growth was incised by a surgeon, after which it began to rapidly spread, passing into the pharynx, then into the right nasal cavity, and through the orbital foramen into the corresponding orbit, and causing exophthalmos, blindness, and severe neuralgic pain. At a cursory glance, the lesions might be mistaken for enchondroma.

The author emphasizes the striking "creeping" tendency of the new growth. *Valerius Idelson.*

Pavlovsky, Professor Alexander D. (Kiev.).—*Polypoid Rhinoscleroma ; a new Clinical Form.* "Meditzinskoïe Obozrenië," 1891, No. 2, p. 126 ; and "Vratch," 1891, No. 2, p. 51.

ACCORDING to the author's definition, rhinoscleroma "constitutes an "infectious chronic granuloma, characterized by the appearance of dense "and, on section, hard nodules and nodose elevations, which develop in "the skin of the nose and lips, on the hard and soft palate in the nasal "cavities, pharynx, larynx, and trachea." As far as Russia is concerned, the disease is fairly frequently met with in the South-Western Gubernias (governments), including Kiev, but very rarely in the Northern (e.g., St. Petersburg).

Quite recently Prof. Pavlovsky came across two cases of a peculiar variety of the affection, one of which referred to a middle-aged male peasant, who sought his advice on account of blood-stained nasal discharge of three years' standing. Except for some elevated scurf, the nasal integuments were sound, but the right nostril was found to be filled up with villous vegetations, and a polypoid tumour, which was as hard as a chondroma, and, on the whole, resembled a sarcomatous polypus. The new growth was removed (by excision and scraping out after a preliminary splitting up of the nasal wing), and, under the microscope, proved to possess a typical structure of rhinoscleroma, with characteristic encapsulated microbes and hyaline masses. The other patient, a man of thirty-five, similarly presented rhinoscleroma of the polypoid form, the symptoms being of one and-a-half year's duration.

The author believes that his cases justify him in supplementing the chapter on nasal polypi by this new variety—"rhinoscleromatous polypi." *Valerius Idelson.*

Sandmann (Berlin).—*A New Method for Correction of the Nasal Septum.* "Deutsche Med. Woch.," 1891, No. 9.

THE author removes the tumour-like irregularities of the septum.

Michael.

Veeder.—*Vertical Nasal Bone Sawing.* "New York Medical Journal," Feb. 21, 1891.

THIS instrument is made by Tiemann & Co., and consists of two arms, whose position can be altered by means of a screw; an endless saw works round the opening between these, and an electro-motor supplies the motive power.

Barclay J. Baron.

Hansberg (Dortmund).—*Cure of a Large Typical Naso-Pharyngeal Polypus.* "Monats. für. Ohrenheilk.," 1891, Nos. 2 and 3.

IN a patient, thirty years of age, suffering from obstruction of the nose, posterior rhinoscopy showed that the naso-pharynx was completely filled by a large red tumour. Digital exploration showed that the tumour was broad-based, and was of the size of an egg. Operation by the galvano-caustic wire was impossible, and the tumour was removed by means of Kuhn's cutting forceps. Cure.

Michael.

Ingals.—*Hypertrophy of the Pharyngeal Tonsil.* "Medical News," Mar. 21, 1891.

A GOOD account of what is already known of the symptoms, diagnosis, prognosis, and treatment of this condition. The forceps are greatly preferred by the author to any other instrument for its removal, and he recommends that the patient when anæsthetized be placed on his abdomen and face, with the head hanging over the table, and thus there is no necessity for swabbing out the blood.

Barclay J. Baron.

Voss and Bergmann.—*Adenoid Vegetations.* Gesellschaft Prakt. Aerzte in Riga. Meeting, February 16, 1891.

VOSS showed specimens of *Adenoid Vegetations* removed by operation. BERGMANN said that a difference must be made between adenoid vegetations of the vault of the pharynx and the true hypertrophy of the tonsilla pharyngea.

Michael.

Hovell, T. Mark (London).—*Adenoid Vegetations in the Naso-Pharynx.* "Brit. Med. Journ.," Nov. 22, 1890. West Kent Med. Chir. Soc., Nov. 7, 1890.

THE author read a paper on this subject, in which he discussed the symptoms and treatment of this disease.

Hunter Mackenzie.

Kafemann (Danzig).—*Researches on 2238 School Children concerning the Nose and Naso-Pharynx.*

THE number of diseases found by these researches prove the importance of prophylaxis and early treatment of diseases of the upper air-passages.

Michael.

Kafemann (Danzig).—*Relation of Nasal and Pharyngeal Diseases to Stuttering.* Danzig, 1891.

IN the greater number out of 151 stuttering patients, the author has found adenoid vegetations and other naso-pharyngeal diseases. He believes that the stuttering will be cured by the treatment of these diseases.

Michael.

The Journal of Laryngology and Rhinology. 201

Cholewa (Berlin).—*On Treatment of Suppuration of the Frontal Sinus by Pyoktanin.* "Therap. Monats.," 1891, No. 3.

IN a case of empyema of the frontal sinus the author entered the opening by means of a probe, cleaned out the cavity by syringing, and then introduced a silver probe, covered with pyoktanin. After three applications the patient was cured.
Michael.

Luc (Paris).—*Empyema of the Antrum of Highmore caused by the Micrococcus of Erysipelas.* Laryngol. Gesells., Berlin, Jan. 1891.

A LADY, sixty years of age, acquired empyema of the cavity during an attack of erysipelas of the face. In the secretion were found erysipelas cocci.
Michael.

Sewill (London), **Miller** (Edinburgh), and **Mac Donald** (London).—*The Etiology of Empyema of the Antrum.* "Lancet," Feb. 7, 14, and 21, 1891.

MR. SEWILL, as a dental surgeon, considers that the vast majority of cases of antral empyema are due to dental diseases, namely, inflammation, with gangrene of the pulp, or suppuration round the apex of a root. In a recent case of empyema the tooth concerned appeared to be the second bicuspid, which was extensively carious. The upper third of the pulp, however, still retained its vitality, and was therefore unlikely to have affected the antrum, but on its being extracted a minute communication between the alveolus and the antrum was found. The antrum contained a quantity of pus.

Dr. GREVILLE MACDONALD, as a rhinologist, maintains that the large proportion of cases falling within his own practice is associated with, and, as he believes, secondary to, intra-nasal suppuration of one kind or another, and dwells on the rarity, in his cases, of tooth-trouble (four out of upwards of forty) which could be held responsible for the mischief.

Dr. A. G. MILLER, as a general surgeon, contributes his experience in the Royal Infirmary of Edinburgh. In all his cases the empyema was connected with a diseased anterior molar, as was, in some cases, only shown when the apparently healthy tooth was extracted for drainage purposes.

[The difficulty in making the order of events—the *post*—is considerable, and when we come to the causal sequence—the *propter*—it is so great as to explain the diversity of opinion of good observers looking from a somewhat different point of view. Our own experience is certainly in favour of the causal influence of dental disease, and in this view we have the support of several authorities. It must be admitted that to argue backwards from successful results following extraction is pathologically inadmissible, as the drainage afforded may be the agent of cure as much as the removal of the cause. We abstracted recently a case in which suppuration from disease of the ethmoid was mistaken for empyema of the antrum, where, of course, the effect of drainage was *nil*. Such an error of diagnosis must be avoided by careful rhinoscopy and probing.—*Reporter.*]
Dundas Grant.

Pavloff.—*A Case of Affection of Antrum Highmori, Sinus Frontalis, and Os Cribrosum.* Meeting of the Russian Surgical Society of Pirogoff at St. Petersburg. "Vratch," 1891, No. 10.

THE author was called in, in order to open the antrum Highmori and sinus frontalis on account of a suppurative affection of this region. The patient was in bed, with a temperature of $41^{\circ}8'$ C., complaining of headache and bad-smelling secretion from the nose. The patient caught a cold about five to six years ago, since which he has always had headache and a considerable secretion, but that did not trouble him very much until the 20th of December, 1890, when the headache became more severe, and the secretion purulent. Finally, on the 19th of January last, he began to have fever, and on 21st there was a rigor and a rise of temperature to $41^{\circ}0'$ C. The rigor was repeated thrice. When the above-named surgeon was called in he opened the antrum, as well as the right sinus frontalis; both contained a few drops of bad-smelling pus. Exploration with a blunt spoon showed also a small quantity of caseous matter. After the operation the temperature was normal during twenty-four hours, but with the beginning of the next day two new rigors occurred. As there was swelling around the right eye the author opened the orbital cavity, and found pus within, which he removed; nevertheless, the rigors and the high temperature continued, cramps of the facial muscles, inability to swallow, and unconsciousness supervened, and the patient died on the third day after the last operation. Although no *post-mortem* took place, the author believes it to be a case of purulent affection of both nasal sinuses, as well as of the os cribrosum, and that the pus spread through the foramen opticum, or the normal holes in the os cribrosum, to the base of the brain, where it produced meningitis, or perhaps even formed an abscess in the frontal sulcus centralis. In cases of chronic nasal diseases complicated with affections of the sinus frontalis the author advises against attempts at cleansing the sinuses through their natural openings, as this may injure the cells of the os cribrosum, and may serve as a means of inducing septic matter into the sinus (in this case, in the matter removed from the sinus, streptococcus aureus was found), but to make a wide opening with a trephine.

E. Draispul.

Hooper.—*Transillumination of the Air Cavities of the Head and of the Larynx.* "Boston Medical and Surgical Journal," Feb. 19, 1891.

THIS method was thought by some who saw Dr. Hooper's demonstration to be of value in the diagnosis of antrum disease, but not in other conditions.

Barclay J. Baron.

MOUTH, TONGUE, PHARYNX, ŒSOPHAGUS, &c.

Mousi (Wien).—*Etiology and Pathogenesis of Stomatitis Aphthosa.* Henoch's Festschrift, Berlin, 1890.

THE author has observed 587 cases in sixteen years. He believes that the disease is infectious, and is caused by micro-organisms whose nature is not yet exactly known. *Michael.*

Rosenberg.—*Tumours of the Base of the Tongue.* Laryngologische Gesellschaft. Meetings, Dec. 19, 1890, and Jan. 16, 1891.

HYPERTROPHY of the glands of the base of the tongue are often observed. Sometimes the lingual tonsil is hypertrophied so as to resemble polypus. This hypertrophy is caused by scrofulosis, catarrhs, leukæmia, or syphilis. The symptoms are difficulty in swallowing, bleedings, cough, feeling of foreign body. The treatment consists in brushing with iodized glycerine, and using galvano-caustic treatment. Retention cysts are sometimes observed in the valleculæ, and may attain the size of a nut. They can be cured by incision or destruction of the cyst wall. Papillomata are sometimes observed, and may cause neuralgic troubles. They are easy to remove by galvano-cautery. In rare cases there are observed pure and mixed fibromata, chondromata, adenomata, dermoid cysts, and thyro-dermoids. Carcinomata and sarcomata of this region are rarely primary, but usually continuous with the tonsils, the tongue, and the epiglottis. They have a very unfavourable prognosis.

HEYMANN shows scissors for operating on tumours of the base of the tongue.

LEWIN discusses on the syphilitic affections of the base of the tongue. He has observed condylomata, gummata, and ulcerations. *Michael.*

Murphy (Newcastle-on-Tyne).—*Leukoplakia of the Tongue.* "Brit. Med. Journ.," Nov. 29, 1890; Northumberland Med. Soc., Nov. 13, 1890.

EXHIBITION of a man who had suffered from this complaint for eight years, and had now developed epithelioma. This was the sixth case of the kind he had shown. *Hunter Mackenzie.*

Shield, Marmaduke (London).—*Cancer of Tongue.* "Brit. Med. Journ.," Nov. 29, 1890; Med. Soc. of London, Nov. 24, 1890.

EXHIBITION of a case of leukoplakia linguæ, two years after half the tongue had been removed for epithelioma. Mr. Owen mentioned a case in which, following the dictum of a well known pathologist, a gumma had been removed from the tongue in the idea that it was malignant. Mr. Stephen Paget and Mr. Ballance affirmed that "nests" were sometimes met with in non-cancerous growths. *Hunter Mackenzie.*

Treitel.—*On Lispings.* Verein für Innere Medicin in Berlin. Meeting, Feb. 2, 1891.

IN one family, five children lisp through abnormal position of the teeth and ataxy of the tongue. The author hopes to cure the anomaly by rectification of the teeth.

GUTZMANN remarks that lispings is often caused by psychic infection.

Michael.

Rona (Buda-Pesth).—*Extra-Genital Syphilitic Infection.* "Pesther Med. Chir. Presse," 1891, No. 6.

IN forty-six cases of extra-genital infection the author observed twenty-six cases of sclerosis of the lips, nearly all produced by kisses of syphilitic persons. The same cause produced eight scleroses of the tonsils.

Michael.

Baginsky, A. (Berlin).—*Congenital Macro-glossia and the Relations between Macro-glossia, Cretinism and Congenital Rachitis.*

DESCRIPTION of four cases of combination of these diseases.

Michael.

Predohl (Hamburg).—*Treatment of Palatine Cleft.* "Jahrbuch des Hamburger Staats Krankenhauses," 1890.

A REPORT on thirty-one cases operated on by Schede, with twenty-six complete results.

Michael.

Stevenson, Thomas (Liverpool).—*Foreign Body in Soft Palate.* "Brit. Med. Journ.," July 26, 1890.

THE impaction in the soft palate of a piece of clay pipe shank, about one-and-a-quarter inches in length, was followed by acute inflammation of the palate, tonsil, and uvula. The foreign body was removed with dressing forceps.

Hunter Mackenzie.

Rice, Clarence C. (New York). *The Etiology of the Disease known as Suppurative Tonsillitis, with its Surgical Treatment.* "Med. Rec.," Jan. 31, 1891.

THE writer believes that all severe grades of tonsillar inflammation are septic, rather than rheumatic, and occur most readily in pathological tonsils, *i.e.*, in tonsils whose phagocytic functions are inefficiently performed. He classifies acute inflammations of the tonsils as :—

1. *Acute follicular or lacunar tonsillitis*, which may become a parenchymatous tonsillitis, and which may, very rarely, be followed by peritonsillar abscess.

2. *Acute parenchymatous tonsillitis* of all grades of severity, which may or may not be followed by peritonsillar abscess.

3. *Peritonsillar abscess.* He takes exception to the terms suppurative and non-suppurative tonsillitis, "because clinical experience has taught us that when suppuration occurs in this neighbourhood pus is rarely to be found in the tonsil, but may almost always be discovered in the connective, either in front or behind the tonsil, so that the term "peritonsillar abscess would seem to be most correct."

In trying to find why an attack of parenchymatous tonsillitis is

repeatedly followed by peritonsillar abscess in some people and not in others, he says, "We can get over the matter easily by attributing it to "heredity, to rheumatic diathesis, or to nervous temperament, but there is "little satisfaction in such explanation." In nearly every instance of peritonsillar abscess he has found an abnormal relation of the tonsil and the pillars of the pharynx. Either the anterior pillar was adherent to and intimately grown into the tonsil opposite its upper portion, or the tonsil was enlarged and was covered by the anterior pillar to the extent of a fourth of an inch and adherent to it at a number of points. When he examines a tonsil for the first time during an attack of acute inflammation, and finds it quite free from adhesions, he feels confident that suppuration will not ensue. In five cases of patients who suffered twice a year from peritonsillar suppuration he has separated the adhesions between tonsil and pharyngeal pillars, and in three instances there has been no suppuration for more than a year and in two none for a little less than a year, although all of these patients have, during that time, suffered from attacks of parenchymatous tonsillitis of a mild grade. He discards the idea that peritonsillitis occurs as a result of low state of health, because "people in the best of health and living under the most favourable conditions suffer from peritonsillar abscess as frequently as any "other class."

When an attack of acute tonsillitis does not tend to improve after the third day he considers that suppuration is going on, and that surgical means are necessary to hasten suppuration and evacuate the pus. Pus is to be found either between the anterior pillar and the tonsil, or in the posterior pillar. The latter region is usually only explorable after the application of cocaine to contract the tonsil and the patient employment of good illumination, when in some cases an abscess may be found and opened. Much more often the pus is to be found in the connective tissue just in front of and a little external to the tonsil, and several days are required to bring the pus out to a point where it can be reached with the knife. In some cases the writer punctures the anterior pillar to the depth of one fourth of an inch with a narrow-bladed tenotomy knife or a galvano-cautery point, then passes a large-sized probe down into the connective tissue lying at the anterior external angle of the tonsil, breaking up the connective tissue on the way.

As a prophylactic method, enlarged tonsils in those subject to peritonsillar abscess should be removed by means of the guillotine, snare, or galvano-cautery. Adhesions between the tonsils and the pillars should be carefully broken down by means of the handle of a scalpel.

[Much in this valuable and practical paper will appeal to those familiar with tonsillitis, and will certainly stimulate to fresh thought those who may not entirely agree with the writer.—*Rep.*] *Dundas Grant.*

Hinkel, F. W. (Buffalo).—*Some Manifestations of Lithæmia in the Upper Air-Passages.* "Internat. Journ. of the Med. Sci.," Nov., 1889.

THE author describes some varieties of throat affections which may be due to lithæmia. His views are somewhat hypothetical.

Hunter Mackenzie.

Hacker (Wien).—*Pharyngo and Œsophagoplasty*. “*Centralbl. für Chirurgie*,” 1891, No. 7.

THE author reports his experiments on the dog concerning plastic operation of the œsophagus by displacement of the skin of the neck. In two cases (Poulsen and Witzel) this operation was performed in men with good results.

Michael.

Aplavin (Kasau).—*Technique of Pharyngotomia Sub-hyoidea*. “*Archiv. für Klin. Chir.*,” Bd. 41, Heft 2.

THE patient, twenty-eight years old, was tracheotomized some months before because of dyspnœa. He swallowed with great difficulty, and had a hoarse voice. By pressure, the patient could bring a tumour of the size of an egg from the œsophagus into the mouth. It was covered with normal mucous membrane, and was of elastic consistence. If the canula was closed, the patient respired with stridor. When the tumour was down, the laryngoscopic view was normal, when it was pressed out nothing of the larynx could be seen. The patient said that he had suffered for two years, and that thyrotomy was performed without effect. As operation *per vias naturales* was impossible, pharyngotomy was performed. It could then be seen that the tumour was situated on the posterior wall of the arytenoid cartilage. It was ligated and extirpated; the wound closed by suture. Cure in six weeks.

Michael.

Sokoloff, Alexander A. (Moscow).—*On Retro-Pharyngeal Abscesses of Children*. “*Proceedings of the Fourth General Meeting of Russian Medical Men*,” 1891, No. 2, p. 59, and No. 8, p. 265; “*Vratch*,” 1891, No. 3, p. 87; “*Meditzinskiï Obozrenie*,” 1891, No. 2, p. 185.

THE author's exhaustive and interesting paper is based mainly on forty cases of typical retro-pharyngeal abscess, and sixteen of retro-pharyngeal lymphadenitis, which have come under his observation in St. Olga's and St. Vladimir's Hospitals for Children in the course of the last four years.

According to his classification, purulent accumulations in the retro-pharyngeal space may be divided into the following groups :—(1) *Single congestive purulent gatherings* in the retro-visceral cervical space which arise in connection with various inflammatory processes in its vicinity (cervical phlegmon, inflammation of cervical lymphatic glands, periostitis of adjacent bones, parotitis, etc.). (2) *Tubercular congestive purulent accumulations*, developing in connection with cervical spondylitis. 3. *Proper retro-pharyngeal abscesses*, due to inflammatory processes in the space itself. The latter category may be subdivided into three groups :—(A) *Traumatic phlegmon* of the retro-pharyngeal cellular tissue, which is caused by a direct inroad therinto of pathogenic microbes. (B) *Metastatic inflammation* of the tissue, produced by the microbes penetrating through the circulation (in cases of small-pox, typhoid fever, scarlatina, etc.); and (C) *Suppurative retro-pharyngeal lymphadenitis*, which is induced by the microbes travelling along lymphatic vessels (and arrested in the glands), and constitutes the so-called “idiopathic retro-pharyngeal abscess” of children. It is seen, therefore, that the author, in common with Verneuil (1842), believes that the “idiopathic” abscess forms, in reality, nothing

else than an acute purulent inflammation of the lower retro-pharyngeal lymphatic glands, situated at the level of the second and third cervical vertebrae. In support of the pathogenetic theory, he brings forward the following facts :—(1) The abscess is almost invariably accompanied by enlargement of deep lymphatic glands on the same side, or on both sides, of the neck. (2) In some cases the retro-pharyngeal suppuration is preceded by a similar process in, or at least a swelling of, the cervical glands. (3) In other cases suppuration of a retro-pharyngeal gland is followed or accompanied by enlargement of an analogous gland lying symmetrically on the other side of the space. (4) Occasionally, a direct observation allows us to trace an actual metamorphosis of a swollen retro-pharyngeal gland into a suppurating one. (5) The lymphadenitis invariably arises secondarily to pharyngitis of one or other variety (in other words, Dr. Sokoloff denies the existence of an “idiopathic” retro-pharyngeal abscess). (6) The disease in question occurs mainly (in 75 per cent. of cases) in children under one year of age, and never attacks those above four ; to put it otherwise, it is observed only in patients of an age during which the glands still exist, and never affects older children in whom the organs have already undergone atrophy and disappeared. (According to the author’s anatomical researches, the glands prove frequently absent even in children about three years of age, and almost invariably so in those above five.)

As to the peculiar liability of early life to retro-pharyngeal abscess, it is thought to be connected with that to acute cervical lymphadenitis in general, which, in its turn, may be explained by “a relatively great frequency in little children of primary peripheral inflammation or traumatic lesions about the head and its cavities.”

With regard to the symptomatology of retro-pharyngeal abscesses in general, and retro-pharyngeal lymphadenitis in particular, the author draws attention to the fact that disturbances of swallowing and breathing may be sometimes absent altogether, the affection running a latent course : hence a frequent digital examination of the pharynx in infants is advised, more especially in those cases where there is present enlargement of deep cervical glands.

Passing to an operative treatment, Dr. Sokoloff lays down the following general rules. (1) Typical retro-pharyngeal abscesses, situated entirely in the retro-pharyngeal space, should be opened by a sufficiently large incision through the mouth. (2) Such abscesses as cannot be reached from the fauces, on account of their deep situation, should be cut into externally, through the lateral aspect of the neck, as practised by St. Germain, Bokai, senior, Burkhardt, etc. (which method has been successfully resorted to by the writer in five cases). (3) The same procedure should be also employed in cases where the abscess is spreading towards the lateral surface of the neck, having passed under the external cervical aponeurosis outwards from the vascular bundle. (4) Traumatic phlegmon of the retro-pharyngeal cellular tissue and tubercular congestive abscesses must be always opened after the external method. (5) The latter prevents wounding the tongue, as well as the penetration of pus into the respiratory tracts. Having found ordinary pharyngotomes

and scalpels inconvenient for emptying retro-pharyngeal abscesses, the author has invented an instrument of his own which represents a small-sized knife with a protecting sheath. The main disadvantage of an ordinary scalpel is said to consist in the impossibility of making a sufficiently free incision, the consequences being retention of pus, and the disagreeable necessity of repeating the operation, and inflicting multiple wounds of the posterior pharyngeal wall.

In the course of a discussion, Dr. A. A. Kisel, of St. Petersburg, expressed his doubts that enlargement of superficial and deep cervical glands might afford a reliable diagnostic criterion in regard to retro-pharyngeal abscesses. Having examined about three hundred and fifty children, he has come to the conclusion that the size of the external lymphatic glands in them oscillates within very wide limits.

Professor V. E. Tchernoff, of Kiev, said that, agreeing with Bokai, junior, he regards the extra-oral operation as a quite superfluous procedure. A single intra-oral incision by means of an ordinary scalpel usually proves sufficient for thoroughly emptying the abscess. A second operation may be needed, but very rarely.

Dr. L. P. Alexandroff, of Moscow, similarly believes that the abscesses can be always very easily and conveniently incised by an ordinary scalpel.

Valerius Idelson.

Bokai (Buda-Pesth).—*Shall we Open the Retro-Pharyngeal Abscess Internally or Externally?* Henoch's Festschrift, Berlin, 1890.

ONLY in cases of spondylitis, or such as are caused by foreign bodies, is the external opening indicated; in all others the internal must be preferred. In 138 cases so treated the author has had only eight cases of death.

Michael.

Sokoloff, Alexander A. (Moscow).—*Tuberculosis of the Retro-Pharyngeal Glands.* "Vratch," 1891, No. 3, p. 88.

THE author describes a very rare form of disease of the retro-pharyngeal glands, which has not yet been mentioned in text-books. It is tuberculosis of the organs. As two typical cases from the writer's practice show, the symptoms closely resemble those of retro-pharyngeal abscess, but differ from it in: (1) Simultaneous presence of tuberculous lesions of deep lymphatic glands on the corresponding side of the neck; (2) the affection persisting for months; and (3) in the fact that the retro-pharyngeal swelling cannot be reduced in size either by punctures or by incisions.

The extreme rarity of the disease depends upon the usual absence of the glands in older children, in whom tuberculosis attacks lymphatics in general most commonly (of 102 cases of tubercular lymphadenitis, examined by the author, only 27, or 26.5 per cent., referred to children under three years of age).

Valerius Idelson.

Wilms.—*Resection of the Œsophagus.* Inaugural Dissertation. Bonn, 1890.

ON a patient, forty-six years of age, suffering from cancer of the œsophagus in its uppermost part, resection was performed. Death from hæmorrhage from the arteria thyroidea superior thirteen days after operation.

Michael.

Voelcker (London).—*Caseous Gland opening into Œsophagus.* "Brit. Med. Journ.," Nov. 22, 1890. Path. Soc. of Lond., Nov. 18, 1890.

EXHIBITION of specimen, taken from a boy, aged nine years. There was no history of any œsophageal trouble. The case was brought forward as an unusual result of the presence of caseating glands at the root of the lung. Of 2504 *post-mortem* examinations at the Children's Hospital, there had been only three other cases of glands rupturing into the œsophagus, and in two of these the rupture took place also into the air-passages. Caseous glands at the root of the lung in tuberculous children were extremely common, and their rupture into the air-passages not at all rare, and frequently without symptoms. The frequent occurrence of malignant disease at the bifurcation of the trachea was probably due to irritation by enlarged bronchial glands. Dr. Penrose mentioned a case in which, in a child, aged seven months, a caseous gland had broken down and ulcerated into the œsophagus, the trachea, and the roots of both lungs.

Hunter Mackenzie.

Lane, Arbuthnot (London).—*Mixed Enchondroma of the Submaxillary Gland.* "Brit. Med. Journ.," Nov. 1, 1890. Clin. Soc. of Lond., Oct. 24, 1890.

NOTES of the case of a man, aged thirty-six, in whom this rare affection had been present four years.

Hunter Mackenzie.

LARYNX, &c.

Jacob, A. H. (Leeds).—*Tuberculous Fibroma of Larynx.* "Brit. Med. Journ.," Oct. 25, 1890. Leeds, &c., Med. Chir. Soc., Oct. 10, 1890.

DEMONSTRATION of specimen, which had been removed by forceps.

Hunter Mackenzie.

Thost and Harke. Aerztlicher Verein in Hamburg. Meeting, March 8, 1891.

THOST shows a patient from whom he has removed a *Hæmorrhagic Cyst of the Larynx.*

HARKE shows a modification of Michel's rhinoscope. *Michael.*

Treitel.—*Laryngitis Hæmorrhagica.* Laryngol. Gesells., Berlin, Jan. 16, 1891.

REPORT on a case concerning a woman thirty years old. Treatment with nitrate of silver.

Cantani, Rugel, Krause, Schultze, Nanwerck, and Renvers.—*Treatment of Laryngeal Phthisis by Koch's Method.*

CANTANI (Naples)—"Berliner Klin. Woch.," 1891, No. 9—reports one case, which showed a desquamative catarrh of the right vocal cord and the inter-arytenoid mucous membrane; a second with ulcer of the right vocal band; a third with paresis of the glottis and hyperæmia of the laryngeal mucous membrane. All three cases improved.

RUGEL (Cologne)—“*Deutsche Med. Woch.*,” 1891, No. 11—observed in his cases during the reaction increase of hoarseness, increase of swelling, and development of new granulations. Complete cure was observed in two cases of small laryngeal ulcerations. In one case of laryngeal phthisis, tracheotomy had to be performed because of the great swelling. In another case of advanced ulceration of the larynx the ulcers spread so quickly that the injections could not be continued.

KRAUSE (Berlin)—“*Deutsche Med. Woch.*,” 1891, No. 11—relates the history of a patient, twenty-two years old, affected for four years with lupus of the nose. She was treated formerly by scarifications, now by injections, followed by strong reaction. The tongue as far back as the soft palate, the lips and the nose, were very much swollen. The temperature was above 40° C. Some days later large necrotic portions of tissue were removed.

SCHULTZE (Bonn)—“*Deutsche Med. Woch.*,” 1891, No. 13—has obtained such bad results with the treatment that he concludes that the method should not be further applied.

NANWERCK (Königsberg)—“*Deutsche Med. Woch.*,” 1891, No. 13—has never observed cures in cases of laryngeal phthisis.

RENVERS (Berlin)—“*Deutsche Med. Woch.*,” 1891, No. 14—reports a cured case of severe laryngeal tuberculosis. A tabetic patient, forty-four years old, had tuberculosis of the lungs, tubercular ulceration of the tonsils, the soft palate, the pharynx, the tongue, the epiglottis, and the whole mucous membrane of the larynx. She was treated without effect by the sharp spoon, chemical and actual cauterization. All the ulcerations cicatrized, and cough and pains disappeared after twenty injections. *Michael.*

Fraenkel, Eugen (Hamburg).—*On Laryngeal Tuberculosis.* “*Deutsche Med. Woch.*,” 1891, No. 9.

IN nearly all cases of ulcerations of the larynx, combined with pulmonary phthisis, he has found that there are specific tuberculous processes; only in three cases has he found ulcers of other origin. The number of bacilli found in the ulcers is not proportional to the gravity of the process. The ulcers are often also affected by the staphylococcus. By careful researches the author has found tubercle bacilli in the uppermost parts of the epithelium, and so has proved that loss of substance of the epithelium is not at all necessary for the immigration of the micro-organisms. The tuberculous infection in the larynx is nearly always caused by invasion of bacilli on the surface. The author recommends Heryng's curettement for incipient cases. *Michael.*

Neumann (Buda-Pesth).—*Clinical Observations on the Innervation of the Muscular Mechanism of the Larynx.* “*Berliner Klin. Woch.*,” 1891, No. 6.

(1) IN a patient, thirty-five years of age, totally aphonic, the laryngoscope showed a typical cadaveric position, with complete immobility of the larynx. The vocal cords were excavated. In the right clavicular fossa was an immobile tumour of the size of an egg, in the left one a tumour of the size of a nut. It looked, therefore, as if both recurrent nerves were compressed. Whether or not the n. laryngeus superior was affected could not be said with certainty. The patient died of marasmus two months later. The tumours were metastatic glands, caused by a primary

intestinal cancer. Both recurrent nerves were totally destroyed; the n. laryngeus superior was intact; the crico-arytenoideus posticus was changed into a thin band of connective tissue, also the crico-arytenoideus lateralis; the crico-thyroideus was normal. The case proves that the crico-thyroideus has only less influence when the other muscles are paralysed. (2) A patient, aged forty years, in attempting suicide, cut the right thyro-hyoid membrane and the n. laryngeus superior. During convalescence the mirror showed paralysis of the soft palate; the right vocal cord was higher in level than the left, and not so tense. There was paralysis of the crico-thyroideus. Both cases proved that Exner's theory of the double innervation is not right. *Michael.*

Loos.—*A Case of Laryngo-Spasm and Tetany.* Verein der Aerzte in Steiermark. Meeting, Jan. 26, 1891.

THE symptoms are frequent laryngo-spastic attacks, increased mechanical and electrical irritability of the muscles and nerves, facialis phenomenon, and Trousseau's phenomenon. The child looks healthy. Laryngo-spasm is found in association with rachitis, but the author has found in forty cases that the children affected have always symptoms of tetany as well.

ESCHERICH (*ibid.*) shows a case of *Diphtheria cured by Intubation*, shows O'Dwyer's instruments, and speaks of the relation of tracheotomy to intubation. *Michael.*

Schuster (Laibach).—*Two Cases of Laryngo-Typhus.* "Archiv. für Kinderheilk.," Band 12, Heft 5 and 6.

THE laryngeal complications of abdominal typhoid are usually observed in the later stage of the disease. The author has twice observed the disease beginning with laryngeal affections: (1) A boy, aged twelve, was ill for eight days; he was feverish, had cough and difficulty of swallowing. Next day high fever, somnolence, cough of croupous *timbre*, aphthous ulcers of the soft palate. The laryngoscope showed thickening of the epiglottis, inflammation of the whole of the laryngeal mucous membrane, thickening of the vocal cords, and a large ulcer on the posterior wall. The next day the laryngeal symptoms were the same, but there were clear symptoms of typhoid, as enlargement of the spleen, diarrhoea, hypersensibility of the ileocecal region. By-and-by the larynx recovered. It was the process of normal typhoid finishing in cure.

(2) A boy of five-and-a-half years complained of pain in his neck and hoarseness. The same day headache and fever began. Next day croupous cough, increasing the following days. Laryngoscopy was impossible. Some days later the laryngeal symptoms ceased, but the symptoms of typhoid fever, with roseola, were very distinct. After long convalescence, cure. *Michael.*

Parker, R. W. (London).—*Urgent Dyspnea in an Infant aged twelve months, occurring suddenly, and terminating fatally within an hour and a half, due to a Caseous Gland which had ulcerated its way into the Trachea.* "Brit. Med. Journ.," Oct. 18, 1890. Clin. Soc. of Lond., Oct. 10, 1890.

IN this case tracheotomy was performed, and afforded some temporary relief. The child died within an hour and a half of the commencement of

the attack. At the *post-mortem* examination, a caseous gland, which had ulcerated its way into the trachea, was found just above the bifurcation, occluding entirely one bronchus.

In the discussion which followed, several speakers mentioned the occurrence of similar cases. Mr. Howse remarked that the rarity of the case consisted in the gland having ulcerated into the trachea as a solid body; usually the glands suppurate, and discharge into the trachea. Mr. Howard Marsh suggested that in such cases a long spoon might be used to remove the obstructing gland.

Hunter Mackenzie.

Murray, Montague (London).—*Ulcer under Vocal Cord, followed by general Emphysema.* "Brit. Med. Journ.," Nov. 22, 1890. Path. Soc. of Lond., Nov. 18, 1890.

EXHIBITION of the larynx of a child of thirteen months, showing a sharply cut circular ulcer, just below the termination of the right vocal cord, and with its floor formed by the cricoid cartilage. The child had suffered from broncho-pneumonia, and twelve hours before death subcutaneous emphysema appeared on the right side of the neck and cheek. Dr. Wilks had seen two or three similar cases occur in typhoid, and Mr. Lunn had seen one case, also in typhoid, which had recovered. Mr. Shattock had seen two similar cases of ulcers, but without emphysema.

Hunter Mackenzie.

Fischer.—*Tracheotomy in the Staetisches Hospital in Danzig, 1882-1888.* Inaugural Dissertation. Leipzig, 1890.

TWO hundred and thirty-eight operations (two hundred and fourteen for diphtheria, twenty-four for other causes), with forty-eight per cent. cures.

Michael.

Lewin.—*Tracheal Canula worn during Twenty-seven Years.* Laryngologische Gesellschaft, Berlin, Dec. 19, 1890.

THE author shows a lady, who consulted him in the year 1863. There was swelling of the vocal cords, ventricular bands, and epiglottis, and extreme cyanosis. Tracheotomy was performed. The canula could not be removed. The author has only found in the literature one similar case, who retained his canula nineteen years.

Michael.

Maas (Berlin).—*Hæmorrhages after Tracheotomy.* "Deutsche Zeitschrift für Chirurgie," Band 31, Heft 3, 4.

CASES of tracheotomy ending fatally by hæmorrhage are sometimes observed. The hæmorrhages can be caused by diseases of the lung or by erosion of the large vessels by decubital ulcers. He has observed the following cases :—(1) A girl, four years old, had diphtheria; tracheotomy; six days later, removal of the canula; good health. Fourteen days later, death through sudden severe hæmorrhage. The *post-mortem* examination showed that there was a hole in the arteria innominata, caused by decubitus. (2) A boy, three years old; diphtheria; tracheotomy; six days later, removal of the canula; good health. Three days later, death from sudden hæmorrhage. The *post-mortem* examination showed a decubital hole in the arteria innominata. (3) A boy, aged five; diphtheria;

tracheotomy. On the ninth day, sudden death through hæmorrhage, caused by a decubital hole in the arteria innominata (observed by Koerte). (4) and (5) cases, death by the same cause on the eighth and ninth day after operation (observed by Florschütz). (6) A girl, three years old ; diphtheria ; tracheotomy ; six days after operation the walls of the wound became necrotic ; discharge of fætid secretion. On the eighth day, sudden death by hæmorrhage. The *post-mortem* examination showed that there was a necrotic wound of the trachea, purulent inflammation of the thymus gland, diphtheria of the bronchi, a hole in the vena innominata. (7) A child, three years old ; diphtheria ; tracheotomy ; eight days later, death from severe hæmorrhage. The *post-mortem* examination showed a hole in the vena jugularis communis (observed by Wauer). In eleven cases there occurred sudden hæmorrhages from the lungs. Of those, four were cured, seven died. The *post-mortem* showed in some of them no pathological condition, in others, broncho-pneumonic processes.

Michael.

Schaefer (Elgersburg).—*Foreign Body in the Air-Passages for Two and a Half Years.* "Therap. Monats.," 1891, No. 3.

A WOMAN, sixty-two years of age, swallowed a piece of bone. She got a severe attack of coughing, but the bone was not coughed out. She felt that it descended, and had pains in the chest. Subsequently she was sick, and had continual attacks of cough, with some secretion and pain. Two and a half years later the bone was removed by a very severe and painful attack of coughing, and the patient recovered in a short time.

Michael.

Skinner, E. (London).—"Puff and Dart." "Brit. Med. Journ.," Nov. 1, 1890 ; Sheffield Med. Chir. Soc., Oct. 25, 1890.

EXHIBITION of a small "dart" which a boy, aged seven, had drawn into his windpipe, and then coughed up again into his mouth, whence it was swallowed and passed *per rectum* two days afterwards, without in the meantime having caused pain or inconvenience. *Hunter Mackenzie.*

Hooper. - *A Pin in the Larynx.* "Boston Medical and Surgical Journal," Jan. 29, 1891.

THIS was the case of a pin, the end of which stuck into the inter-arytenoid space, and the other end just above the anterior commissure of the vocal cords, and was extracted forcibly with forceps. The symptoms were hoarseness and pain in swallowing. *Barclay J. Baron.*

Ravenel.—*Retention of a Foreign Body in the Larynx for Thirty-eight Years.* "Medical News," Mar. 21, 1891.

A PIN was allowed to drop into the larynx of a child seven years old, and after violent coughing it was expectorated thirty-eight years afterwards. Laryngoscopic examination showed two inflamed circumscribed areas directly opposite the posterior ends of the two ventricles. It was inferred that the pin had lain all these years across the larynx, with its two ends embedded in it. Laryngeal symptoms, which were present up to the removal of the pin, and disappeared when it was coughed up, and

absence of pulmonary troubles, are considered to be sufficient evidence of its having been in the larynx, and not in the lung. *Barclay J. Baron.*

Lloyd, Jordan (Birmingham).—*Foreign Body removed from the Air Passages.* "Brit. Med. Journ.," Oct. 25, 1890.

EXHIBITION of a "locust stone," which had been removed by tracheotomy from the trachea of a girl aged five years, where it had lain for more than five months. A laryngoscopic examination had not been practicable, and the diagnosis was based upon the history, and on the occurrence of paroxysmal urgent dyspnoea, and paroxysmal metallic cough and stridor.

Hunter Mackenzie.

Fowler, G. R. (New York).—*A Case of Modified Laryngotomy for Epithelioma of the Larynx—Recovery.* "Internat. Journ. of the Med. Sci.," Oct., 1889.

THE operation is that recommended by Solis-Cohen, viz., thyrotomy, and removal of the soft (diseased) tissues, the cartilages being left intact.

Hunter Mackenzie.

Bardenheuer (Cologne).—*Propositions concerning Extirpation of the Larynx.* "Langenbeck's Archiv.," Band 41, Heft 3.

COMPARE the report on the paper of the author published in the "Deutsche Med. Woch." (See this Journal, 1890.) *Michael.*

Meyer.—*Total Extirpation of the Larynx; Artificial Larynx.* "New York Medical Journal," Feb. 21, 1891.

THE patient was sixty-five years old, and the operation was performed for epithelioma, and he wears one of Gussenbauer's artificial larynx tubes. With this instrument he is able to make himself understood, after fourteen days' practice with it in position. *Barclay J. Baron.*

Tauber (Warsaw).—*On Extirpation of the Larynx (Laryngectomy)—A Critical-Statistical Study.* "Archiv. für Klin. Chirurgie v. Langenbeck.," Band 41, Heft 3.

THE paper is a critical study of the question of laryngectomy. The author relates the opinion of the different authors, and then gives a table of 163 cases collected from the literature of the subject. The results are of great interest, and it is very desirable to read the paper in the original. In Germany the operation has been performed as many times as in Russia, England, and France all put together. It has been performed on 113 men and 31 women, the majority between the ages of forty and sixty. Of the cases reported, 67 = 41·1 per cent. died from the operation itself or from complication within the next few days, 13 = 7·9 per cent. were still living three years after operation (of these, Bottini's case, ten years after operation, is especially remarkable), 47 = 28·8 per cent. died in the year after operation, and 32 = 19·6 per cent. were relatively cured, living over a year after. The operation cannot be compared with ovariectomy, which also had 70 per cent. of deaths in the first hundred operations, but in which the results have so much improved in every succeeding hundred that now the mortality is only 4 to 5 per cent. The mortality of laryngectomy has not improved during the last year. The author concludes that

palliative tracheotomy, or even laryngotomy, must be preferred to the radical operations, and believes that laryngeal extirpation is one of the operations of which Stromeyer says: "Humanity suffers no damage if the operation is not performed, and surgery will derive no honour from it." *Michael.*

Kohler.—Freier Verein der Chirurgen in Berlin. Meeting, Jan. 12, 1891.

KÖHLER showed a larynx of a child of fourteen months, on whom, some months before, tracheotomy and laryngo-fissure had been performed on account of papillomata, which had filled the whole larynx. Death from diphtheria. *Michael.*

Janowski, Adolf J. (Simferopol).—*Case of Fracture of the Larynx, with Laceration of the Trachea.* "Transactions of the Simferopol Medical Society," 1890, Vol. 1, p. 93.

A YOUNG girl, aged twenty-one, while exercising on a swing contrivance, somehow got her neckerchief violently caught by a rope. When admitted to a local hospital a few minutes later she was suffering from extreme difficulty of breathing, the respirations being accompanied by a "clapping" sound. On the anterior aspect of the neck there were present a red strangulation groove, running obliquely backwards and upwards, and a superficial horizontal laceration, about one and a half centimètre long. On palpation of the neck there could be elicited only subcutaneous emphysema, but no crepitation or tenderness about the larynx. After an attack of vomiting, which had been induced by a digital examination of the epiglottis, the patient's breathing became somewhat easier, and the "clapping" sound disappeared, the girl falling quietly asleep. About four and a half hours after the accident, however, the laryngeal stenosis returned in an aggravated form (with labial cyanosis, cedematous râles about the lungs, etc.), her breathing ceasing altogether as soon as she assumed a horizontal position. Tracheotomy was performed without delay. It did not bring any relief, however, the girl dying about half an hour later, notwithstanding assiduous performance of artificial respiration. The necropsy revealed a multiple fracture of the laryngeal cartilages, the fragments freely protruding into the cavity of that organ, while the trachea proved to be completely torn off from the larynx, and displaced downwards. Unfortunately, no further anatomical details are given.

Valerius Idelson.

Chiari (Prag).—*On a new form of Tripartition (Dreitheilung) of the Trachea in a Boy, sixteen years old, with other Anomalies of Formation, as absence of the Spleen and Dislocation of the Ligamentum Hepato-duodenale.* "Prager Med. Woch.," 1891, No. 8.

THE boy, who died of *congenital defectus septi ventriculorum cordis*, had on the left side of the trachea a third bronchus, finishing in an also trilobed lung. *Michael.*

THYROID, NECK, &c.

Stilling.—*Production of Exophthalmos.* "Lancet," Feb. 28, 1891.

LIGATURE of both external jugulars and section of the sympathetic on one side produced œdema of the face, of the nasal mucous membrane, flow of tears from both eyes, exophthalmos on both sides, prominence of the lid, and slight upward deviation of the eyes. All the symptoms disappeared the same day, except the exophthalmos, which lasted from six to ten days. Simple ligature of the veins produced slighter exophthalmos

Dundas Grant.

Montgomerie (Penzance).—*A Case of Exophthalmic Goitre ending Fatally from Sudden Pressure on the Trachea.* "Lancet," Feb. 7, 1891.

SWELLING of neck for nearly three years, consisting of a softish elastic mass, larger on the left side than on the right, and with a small central mass. Circumference of neck 23 inches. The eyes showed some exophthalmia and dilated pupils; Von Graefe's sign present to a slight extent. Death after unconsciousness, stridor and cyanosis, low tracheotomy and artificial respiration being unavailing. The right lobe of the thyroid was found firmly attached to the trachea, and bulging-in the softened cartilages. [The interest of this case is dependent entirely on the diagnosis, the event being a most unusual one in pure exophthalmic goitre. Without questioning the accuracy of the diagnosis, the description of the symptoms, and of the *post-mortem* examination, is not sufficiently detailed to be absolutely convincing to the reader who has not seen the case.—*Reporter.*]

Dundas Grant.

Ellis, W. M.—*Remarks on a Case of Acute Goitre occurring during the Puerperal Period.* "Brit. Med. Journ.," Nov. 22, 1890.

RECORD of a rare case. Acute goitre is more usual during pregnancy than during the puerperal period.

Hunter Mackenzie.

Barnes, Robert (London).

Simpson, J. C. (Stoke Newington).—*Goitre and Pregnancy.* "Brit. Med. Journ.," Nov. 29, 1890.

THE paper of Dr. Ellis (*vide supra*) is the occasion of communications by these physicians. The first-named affirms that goitre is essentially a disease of high nervous and vascular tension, and its incidence, as described by Dr. Ellis, falls entirely within the ordinary laws of the affection. The latter refers to and recommends the surgical treatment of the asphyxia from pressure by performing intubation by means of the passage of a No. 9 or 10 catheter.

Hunter Mackenzie.

Lloyd, Jordan (Birmingham).—*Excision of Bronchocele.* "Brit. Med. Journ.," Nov. 15, 1890.

EXHIBITION of a patient, aged twenty, from whom a bronchocele,

weighing sixteen ounces, and of two years' duration, had been excised.
Recovery. *Hunter Mackenzie.*

Robson, Mayo (Leeds).—*Thyroidectomy*. "Brit. Med. Journ.," Oct. 25, 1890.
Leeds, &c., Med. Chir. Soc., Oct. 10, 1890.

EXHIBITION of two patients on whom this operation had been performed on account of dyspnoea from pressure on the trachea. To avoid the risks of cachexia strumipriva, a small portion of thyroid tissue had been left.
Hunter Mackenzie.

Lawford (London).—*Recovery from Graves's Disease*. "Brit. Med. Journ.," Oct. 25, 1890; Ophthalmological Association of the United Kingdom, Oct. 16, 1890.

NOTES were read of the case of a woman aged forty-three, who ten years previously had suffered seriously from this disease. For the last nine years she had been in good health, and now the thyroid could not be felt, and there was no cardiac trouble. Dr. Hughlings Jackson said it was important to know that the disorder might pass off, as in the present case.
Hunter Mackenzie.

Carr, Walter (London).

Murray, Montague (London).—*Sporadic Cretinism*. "Brit. Med. Journ.," Nov. 29, 1890; Med. Soc. of London, Nov. 24, 1890.

EXHIBITION of several patients varying in age from one-and-a-half to sixteen years. In all the thyroid gland was absent. Mr. E. Owen pointed out that these were really examples of infantile myxœdema, such as would theoretically result from removal of the thyroid. *Hunter Mackenzie.*

Cardew, Denton (London).—*The Value of Diminished Electrical Resistance of the Human Body as a Symptom in Graves' Disease*. "Lancet," Feb. 28, 1891.

THE symptom present in the majority of cases (averaging as low as 3000 ohms) is considered by the writer to be of little, if any, value. He attributes it merely to the presence of perspiration. In a mummy (the ideal of a human body free from moisture), the resistance was calculated at 6,000,000 ohms. In a healthy male, free from sensible perspiration (after sleeping in a cotton night-shirt), the resistance was 32,798 ohms. With sensible perspiration (after work in flannel shirt), it became 2438.8 ohms. By administering hot spirituous drinks to a healthy subject warmly covered in a hot room, and causing him to sweat freely, Mr. Cardew diminished the resistance from 80,000 to 1900 ohms. (Wolfenden found diminished resistance irrespective of sweating.) *Dundas Grant.*

Levy.—*Hysterical Spasm of the Muscles of the Neck—Hysteric Stridor*. Laryngologische Gesellschaft zu Berlin. Meeting, Jan. 16, 1891.

(1) Demonstration of a patient, twenty-one years old, who has for some years had contractions of the muscles innervated by the hypoglossal. He has also some other hysterical symptoms. (2) A girl, twenty-two years old, with stridor existing for three weeks, caused by perverse hysteric

action of the vocal bands. The epiglottis has omega form (Ω), and is sucked in at every inspiration.

SCHADEWALDT narrates the case of a singer who acquired spasms of swallowing through improper method of using her singing voice.

SCHNEIMANN remarks that suction inwards of the epiglottis alone can produce dyspnoea and stridor without perverse action of the vocal bands.

B. FRAENKEL also has observed dyspnoea from suction of the omega-formed epiglottis. *Michael.*

Lamont (Newcastle-on-Tyne).—*Spasmodic Wry-Neck*. "Brit. Med. Journ.," Oct. 25, 1890; Northumberland, &c., Medical Society, Oct. 9, 1890.

THE patient was a man aged sixty-four, and the affection had been present for a year. The left sterno-mastoid was most affected; the right angle of the mouth was also drawn up, and the platysma, biceps, and deltoid on the right side were affected. Medicinal treatment had been ineffectual. *Hunter Mackenzie.*

Horsley, Victor (London).—*Further Note on the Possibility of Curing Myxædema*. "Brit. Med. Journ.," July 26, 1890.

THE method adopted is by the transplantation of healthy thyroid tissue into the subjects of this disease. The first attempts were made by Professor Kocher in 1883, the next by Dr. Bircher, in Aarau, in 1889. The author concludes by saying that this operation (transplantation) should always be performed in myxædema and sporadic cretinism, and also in cachexia strumipriva. It has not yet been decided whether it is better to transplant thyroid tissue from a gôitre, or a healthy gland from a lower animal.

Hunter Mackenzie.

Moore, Norman (London).—*New Growth in Mediastinal Glands and Left Lung*. "Brit. Med. Journ.," Oct. 25, 1890; Path. Soc. of Lond., Oct. 21, 1890.

SPECIMEN exhibited from a boy aged ten years. The growth was a sarcoma; it had invaded the whole upper part of the left lung and the upper mediastinal glands. There were signs of pressure on the recurrent laryngeal and sympathetic nerves, and the left pulse was absent from complete compression of the sub-clavian artery. *Hunter Mackenzie.*

Lindenbaum, Wilhelm Th. (Iaroslavl).—*Extirpation of Tubercular Cervical Lymphatic Glands*. "Meditsinskoië Obozrenië," 1891, No. 2, p. 129.

DR. LINDENBAUM, house-surgeon to the local Zemskaja Bolnitsa, communicates a series of ninety-four cases of cervical tubercular lymphadenitis treated by him by excision during the last eight years. All the patients (peasants) made excellent recovery, getting up on the third day after the operation, and leaving the hospital on the third week. Ligature of large-sized cervical vessels became necessary only in three cases. Of the grand total, fifty-four patients were subsequently lost from sight; of the remaining forty cases, in two pulmonary phthisis developed in three and five years respectively after the operation, while in another patient resection of the knee joint was performed about twelve months after the extirpation of the glands. All others have remained well up to this date

(April 25th) ; in many cases from five to eight years have elapsed since the operation. On the whole, the author believes that extirpation affords the best means for treatment of tubercular glands. Scraping out, injections of green soap, iodine preparations, parenchymatous injections of arsenic, hot-water compressor, etc., are thought to be unreliable. *Valerius Idelson.*

A Living Mannikin. "Med. Press and Circ.," March 11, 1891.

A WRITER in the "Medical Press" draws attention to the services of the well-known Frau Gelly, of the Vienna schools. This person has for years made a livelihood by allowing students to practice on her the exploration and manipulation of the larynx. The suggestion is made that in our own capital there is ample scope for several such subjects. *Dundas Grant.*

REVIEWS.

A Manual of Diseases of the Nose and Throat, including the Nose, Naso-Pharynx, Pharynx, and Larynx.—By PROCTER S. HUTCHINSON, M.R.C.S. London: H. K. Lewis. 1891.

THERE is practically nothing new or original in this book, and we do not think that laryngology and rhinology would have lost much if it had not been written. It appears to us to be merely a *résumé* of the opinions and methods of other men who have really done good work in the specialty. We notice that curetting naso-pharyngeal adenoids is not even alluded to, and when the author talks about a specific "rheumatic tonsillitis," which he is able to diagnose because of the "red glairy appearance" of the tonsils, we believe that he is not in accord with more experienced observers. Some of the diagrams we recognize as old friends, and some of the others we do not think are well drawn.

B. J. Baron.

Koch's Remedy in relation specially to Throat Consumption.—By LENNOX BROWNE, F.R.C.S. Ed. London: Baillière, Tindall, and Cox. 1891.

THIS book appeared a few months too soon. If anything will enable us to determine the value of Koch's remedy it is *time*, and in January of this year, when the book was written, none of us knew of anything certain as to the action of "tuberculin (Kochii)," so that we do not derive much help from reading it. The descriptions of tuberculosis and lupus of the throat and the illustrating diagrams are excellent, but the statements about "tuberculin" are those of one who, like ourselves, is gradually learning to estimate its value, and they cannot, therefore, be considered to be authoritative. We believe that if the author had deferred going to press for a few months, when he would have had more practical experience of the action of Koch's lymph, he would have considerably modified some of the favourable views that he held in January last. The true scientific attitude of mind towards the so-called specific ought to be one of waiting and watching.

B. J. Baron.

Medical Symbolism, in connection with Historical Studies in the Arts of Healing and Hygiene.—By THOMAS S. SOZINSKEY, M.D., Ph.D.
London: F. A. Davis. 1891.

It is refreshing to find a member of our profession ready and able to devote himself to classical literature, the study of which alone could enable him to write such a book as this. Most of us are too busily engaged in every-day affairs to draw from the deep wells of knowledge and philosophy stored up in ancient times, and we thank the author of this little readable book for having given us the fruit of his labours.

B. J. Baron.

Rethi.—*Diagnostik und Therapie der Kehlkopf Krankheiten* (Diagnosis and Therapy of the Diseases of the Larynx), with 30 woodcuts. Franz Deuticke, Leipzig and Wien, 1891.

USEFUL manual for students and practising physicians. *Michael.*

NOTES.

Mr. LENNOX BROWNE desires us to call attention to the fact that, in his remarks in the discussion upon diphtheria at the last meeting of the British Laryngological Association (see this Journal, April, 1891), the reporter has made him use the word "Hartproosher" for the town of Berkhamstead, Herts; and has also confounded Cape Town with Cape Colony.

Dr. J. N. MACINTYRE has been appointed Lecturer on Diseases of the Throat and Nose at Anderson's College, Glasgow.

Dr. ADOLF BRONNER has been appointed to the charge of the Laryngological Department of the Bradford General Hospital.

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BACTERIOLOGY IN RELATION TO DISEASES
OF THE THROAT AND NOSE.

By JOHN MACINTYRE, M.B., C.M.

(Read at the Meeting of the British Laryngological Association, March 20, 1891.)

PART II.—DIPHTHERIA.

THERE can be little doubt that many of the parasites found in the body, and particularly those lying in the mouth, are comparatively harmless, or at least as far as we know are harmless to the host on which they live. But some of these same organisms, or their products, are by no means harmless when injected into living animal tissues. It is possible, as we shall attempt to show, that in some instances at least they are useful in removing dead material which might otherwise become injurious. Again, there can be little doubt, from careful investigations recently made, particularly in the alimentary tract, that some micro-organisms have a distinctly physiological action in producing certain changes in the gastric juices. But for our purpose to-night, the most important consideration is the pathogenic action, local or constitutional. Anthrax, relapsing fever, leprosy, tubercle, lupus, erysipelas, diphtheria, typhoid, pneumonia, syphilis, and the suppurative processes are but a few of the diseases which are now claimed to have a specific organism producing the affection.

We will therefore pursue this part of the subject in the following order:—Firstly, the parasites found in the bodies of apparently healthy persons, and which are considered harmless; secondly, parasites which may have a function in maintaining the healthy economy; and lastly, a few of the above-mentioned diseases which have a particular interest for us.

If anyone take the trouble to scrape a little of the mucus from the lining of the nostril or the mouth in an apparently healthy subject, a great variety of micro-organisms will be found, and without a knowledge of some of them at least, it will be impossible to make any investigation of a more specific nature. In the nostril, for example, a considerable number of cocci are always found, large and small, and several bacillary forms are continually present. Specimens of these have been placed under the microscopes. These may be mixed considerably with the spores which are usually found in the atmosphere, and which give us trouble if a cultivation be made from the mucous surface. A considerable number of investigators have entered into the study of these forms, and at a future period of the Society we may take the opportunity of entering more fully into the varieties (so-called) of these organisms. Generally we have found more than one form of the rounded cells, but whether they are the same organism in different stages of development, or distinct species, it is impossible at present to say. The bacillary forms will also be seen under the microscope.

This department offers good opportunities for investigation, because some are inclined to think that one of these rod-like forms is the cause of hay fever. De Bary's remark upon this is extremely useful. "With regard to the supposition," he says, "that bacteria are ever present in the catarrh of the cavity which goes by the name of hay fever, I can bear out this fact, being a sufferer from that malady, though I must add that bacteria are also present during the ten to eleven months of the year that are free from hay fever."

In the mouth the investigation of bacteria becomes more difficult, owing to the new germs which are constantly being introduced by the food and drink. Millar has isolated over one hundred varieties in the course of some years, and if a research of this nature were prolonged, it is not unlikely that all the known forms of germs would be discovered in the buccal cavity. It has been customary to describe four main forms, and a diagram of these will be thrown upon the screen later in the evening. They are described by De Bary in the simple form of (1) *leptothrix buccalis*; (2) masses of cocci; (3) a spirillum form; and (4) a bacterium. Millar classifies the mouth bacteria proper further into (a) *leptothrix innominata*; (b) *bacillus buccalis maximus*; (c) *leptothrix buccalis maxima*; (d) *iodococcus vaginatus*; (e) *spirillum sputigenum*; (f) *sprichoete dentium*.

An obstacle to obtaining a knowledge of the true nature lies in the fact that none of the mouth-bacteria proper will grow upon the ordinary culture media.

Some writers very properly object to the loose way in which the term "*leptothrix buccalis*" has been applied, and Millar applies the term "*leptothrix innominata*" to the bacteria grown in threads, whose biology is too little known to define their relation to other mouth-bacteria, or to form a separate group with distinct peculiarities. By scraping a small portion of the tooth these forms can easily be seen, and, in addition, we find the others above mentioned.

Bacillus buccalis maximus consists of isolated bacilli, or sometimes threads lying parallel to or crossing each other 30 to 150m. long, and

distinctly articulated, the individual cells measuring 2 to 10m. in the longitudinal and 1 to 1.3m. in the transverse direction. It turns blue on the addition of iodine.

Leptothrix buccalis maxima. This is an organism consisting of long, thick or slightly curved filaments, resembling the last, but not articulate, and not giving the same stain with iodine. It may possibly be a variety of the last.

Iodococcus vaginatus is found singly, or in chains formed of four to ten cells, appearing as flat discs, or it may be somewhat rounded or square bodies lying in a membrane. The former takes on the stain with iodine, the latter does not. The chains have a diameter of 0.7m.

Spirillum sputigenum occurs in the form of rods curved like commas, showing spiral movements, and fission not taking place, S-like forms or short spirals may be produced.

Spirillum dentium consists of spirals from 8 to 25m. long, and are capable of movement.

Owing to the difficulty in cultivation, it is at present impossible to say how many of these forms of bacteria are merely varieties, and to show the extent to which the subject has been developed, not fewer than twenty-two different organisms have been recorded.

Under the microscopes the more common forms of these will be found.

PATHOGENIC FORMS: *Tubercle.*—We have placed under the microscope a number of specimens from cultivations of the bacillus tuberculosis, and sections showing the organisms in the tissues. This organism is now so well known and the vital phenomena so thoroughly understood, that it is quite unnecessary for me to spend your time upon it. It may be more interesting for the Society to see a pure cultivation on agar-agar after fourteen days' growth kept at a temperature of 40° to 50° C. In the tube the organisms will be seen growing in their typical thread-like processes, and not liquefying the medium in which they grow.

From the time that Klencke, Villemin and others demonstrated the inoculability of tubercular tissue until the publication of Koch's classical work on the subject these organisms have continued to excite profound attention. When we read in his first communication of something like 217 animals of different kinds experimented upon before any conclusion was arrived at, one gets an idea of the immense work which must have been got through to have placed this disease upon a sure basis for diagnosis and experimental treatment.

Lupus.—It will not be necessary to make any remarks upon lupus any more than in the last instance. It is an affection of interest to us because doubt has been thrown upon the identity of the specific organism which produces it and tuberculosis. There can be no doubt about the bacilli closely resembling each other, but, when seen, everyone working at throat and nose affections is struck with the clinical facts of the case in the sense that the two affections may be considered as quite distinct. Various theories have been formed to explain the immunity which the nose and mouth enjoy from the presence of tubercle. It has been asserted that the flow of mucus to the surface may prevent the entrance of the bacilli. It has also been suggested that the cilia may prevent

them entering the tissues, and, further, it has been thought that the structure of the parts is such as to render them less innocuous. This view, to our mind, is by no means the least likely, because, as we suggested at a former meeting of this Association, different affections seem to attack different tissues. The very disease of which we speak, lupus, is oftenest seen in the skin—an epiblastic structure, and if we reflect for a moment we find that when the disease passes into the oral and nasal cavities it is also into the epiblastic structure. On the other hand, phthisis laryngea, as a rule, begins in the hypoblastic structure, and it is not as common to find tubercle in the skin as in mucous membranes.

Passing to the more acute diseases, diphtheria next claims our attention. Since the time of Bretonneau this has been looked upon as a specific and contagious disease. The possibility of having recognised the true organism has been for long doubted, and in our country the workers in this department have been comparatively few. In a visit to the French capital two years ago we were struck with the number of those who, both from a bacteriological and clinical point of view, looked upon the cause of the affection as now being quite established. For example: M. Jules Simon writes, "*Toute fausse membrane qui contient ce micro-organisme est diphteritique, toute fausse membrane qui ne le renferme pas n'est pas due à la diphtérie.*"

Klebs in the Wiesbaden Congress in 1833, made the statement for the first time that these organisms were to be found in the false membrane covering the mucous surfaces. Loeffler, the next worker in this subject, made a most important series of observations on twenty-five cases in which he found the bacillus. Pure cultivations were made, and inoculations of them reproduced false membranes in various animals, such as pigeons, rabbits, &c., particularly when applied to the excoriated surface of the conjunctiva, cornea, trachea, etc.

Intravenous and subcutaneous injections produced the same result, but this first paper rendered the experiments doubtful because of the presence of bacilli in health; also, because in some typical cases the bacillus was absent. Loeffler subsequently published a communication giving ten cases in which he had found these organisms, and Hopfmann confirmed a part of these results. Roux and Yersin next took up the study. The work which they did is to be found in "*Annals of the Pasteur Institute,*" and, briefly summarized, they claim to have found the bacillus in fifteen cases, and to have produced the typical paralysis in animals inoculated. Lastly, they have produced the paralysis without the living germs, by separating the poison and injecting it. As this is a department which may be of considerable interest to us for diagnostic purposes at least, it may be useful to point out that scrapings of the false membrane often show this bacillus. Perhaps the simplest way of searching for them is by inoculating a tube containing blood serum or agar-agar. Sometimes almost a pure cultivation of them may be got in this way. Loeffler recommends the best medium to be three parts of sheep's blood serum, one part of veal broth, one per cent. of grape sugar, half per cent. of common salt. The bacilli easily grow at 37° C. The colonies will be seen to grow in round or oval dark brown discs; by these running

together irregular figures will be formed. From microscopic specimens shown here it will be seen that these vary much in length, but the average is much the same as the tubercle bacillus. One or both ends may be swollen, and so the bacillus may take a distinct club-like form. With methylene blue they readily take on a deep stain. There is not uncommonly the appearance which gives one the idea as if they were composed of short rods, with irregular outlines. Difficulties in this investigation may be summed up as follows : Firstly, that these organisms have been found in the membranes, but not in the internal organism. Secondly, we may have a number of organisms present in the membrane. Thirdly, the lower animals are by no means so susceptible to this as to many other poisons. Lastly, the suggestion has been made that different forms of diphtheria may be due to different infective agents.

Roux and Yersin, like Klebs, find these bacilli at the deepest part of the layer of exudation. They recommend that a platinum needle should be passed into the false membrane, and that the surface of matter in the tube be streaked, and they further recommend that the same needle should be used—without taking any more material from the false membrane—to inoculate a number of other tubes, because the first are usually too profuse in their growth to give satisfactory results, whilst the latter is little short of a pure cultivation. Specimens of these tubes containing cultivations of the bacilli have been placed before you.

In eleven cases which we have investigated the bacillus has been found in seven, but from the clinical standpoint it is difficult to make any definite statement, because while Roux and Yersin speak of having found this bacillus in fifteen cases, Prudden states that of twenty-four cases where early autopsies had been made the only species of parasite present in all but two was what he calls streptococcus diphtheria. In addition, about twenty other different forms of bacteria were isolated. According to this writer, in no case was the bacillus of Loeffler to be seen. It is to be noted that the investigation differs from the above in the fact that the others were taken from the membrane during life.

Considering the extreme difficulty of diagnosis in many cases of diphtheria, and the many attempts which are now being made to treat it on an antiseptic basis, nothing could contribute more to confirm or disprove these views than were the Association or its Fellows individually to make a systematic examination of the membrane in each typical case of diphtheria presented to them.

Syphilis.—A considerable number of writers have made statements, many of them erroneous, in this affection, but lately Lustgarten has shown specimens of the bacillus in the specific tissues. His special method is staining in aniline gentian violet solution and subsequent decolorization by sulphurous acid. In form the rods are usually bent or slightly S-shape, four and a half millimètres long, with slight knob-like swellings at the ends. Control experiments have been made by others, and at present the organism is only doubtfully accepted as the cause of the affection.

Pneumonia.—Although of less consequence to us, and more by way of comparison, we have placed under the microscope the two organisms

usually associated with this affection, viz., Fraenkel's and Friedlander's bacillus.

Suppurative Processes.—The organisms found in this, which are of interest to all surgeons, are also shown under the microscopes.

Cancer.—Considering the attitude of the different observers at present, it is not necessary here to say much of the organism which has been recently claimed by Dr. Russell, of Edinburgh, as having a causal association in this affection. Further investigation is required.

The importance of a knowledge of these forms cannot be overestimated. In tubercle, the necessity of early recognition of the disease by the presence of the bacillus has been emphasized of late, and in this connection no one has done better service than Dr. Hunter Mackenzie, who for years has brought the importance of the subject before us.

When one meets with doubtful cases of acute disease, particularly of a diphtheritic nature, one cannot help reflecting how useful it would also be were a specific organism found in the false membrane, and that organism proved to be the cause of diphtheria.

In passing to the consideration of the third part of the paper it will not be necessary to occupy much time, because everyone here is sufficiently familiar with the subject from a therapeutic and practical standpoint. Let us consider briefly, however, in what direction we can expect protection from the invasion of these organisms, and more particularly with a view to finding if there be anything to help us in our department.

1st. *Inoculation.*—While recognising the immense benefit of this in one affection at least, no one will be bold enough to suggest that inoculation of all diseases should be performed in an early age. The experiments of Pasteur in introducing the poison after the disease has been communicated to the individual, if they could be applied to other affections than hydrophobia, would be of great advantage, but at present we as laryngologists can hope for nothing from this method.

2nd. *Prevention by exclusion of the entrance of germs.*—There can be no doubt whatever of the great work done by Lister in this way; but, unfortunately, the greatest part of our work lies in the treatment of individuals into whose tissues the germs have already been introduced. Doubtless, isolation of persons suffering from infectious diseases protects others, but it does nothing for the individual affected.

3rd. While the interesting researches of Mentschicoff show that certain organisms meet with considerable resistance in the tissues from certain cells therein, we cannot hope for much practical benefit from this observation as yet.

4th. *Agents which will destroy the organisms found in the tissues.*—The numerous remedies which have been employed in the hope that the bacillus may be destroyed within the body is a sufficient testimony to the earnestness with which the subject has been pursued; but all will acknowledge the careful observation and immense service which Rosenberg and Krause have rendered by the introduction of menthol and lactic acid.

We are, however, forced from observations to place ourselves among those who hold that neither intra-laryngeal nor intra-thoracic injections, nor yet spray, gargle hot or cold, nor inhalations, have been yet proved as satisfactory antiseptic treatment. The possibility of internal adminis-

tration of remedies by the mouth, or subcutaneously, may in the future accomplish more. At least we might hope so from our experience of perchloride of mercury in syphilis, and the favourable results recorded by Jacobi when this agent is given in acute diseases, such as diphtheria.

In the last-mentioned disease the difficulty to our mind arises in this way—that one cannot administer much of such a poisonous agent in the short period at our disposal, while in specific diseases small doses for a considerable time may be expected to affect the micro-organisms without seriously injuring the patient; and doubtless this has led to the attempts to administer other remedies of a similar nature, *e.g.*, salicylic acid. In this connection, along with Professor Charteris, we have made a number of experiments with the phenol series, and have been able to satisfy ourselves that even carbolic acid is probably more dangerous on account of its impurities than from its own poisonous properties. For example, eight grains of ordinary acid have invariably killed rabbits injected, whilst the same dose of pure acid has in a few instances only had this result. We do not claim by this to have discovered a cure for anything, but place the facts before you more by way of suggestion than anything else.

5th. *By rendering the soil unsuitable.*—In this way Koch hopes to overcome what has proved such an obstacle to experimenters who devote themselves to the method described in the last section. As far as we are concerned, we had as little sympathy with the great wave of enthusiasm which resulted from the announcement of this discovery as we have with the condemnation which it is now receiving in many quarters.

Time alone must settle the permanency of the improvements which undoubtedly have taken place in some, though it may be few, of the cases. In the case of lupus, which we have had under our observation, the improvement which was noted at first has by no means proved of a permanent character. This is the more to be regretted as no other known method had had the least beneficial effect upon our patients before this remedy was tried. It may be that we failed to bring the auxiliary aids in the way of curetting or constitutional agents to secure permanency, and it is possible that a desire to test the remedy by itself led to this probable error. We have carefully recorded all the local and constitutional changes which the remedy is known to produce, and prefer, in the meantime, to reserve our opinion. Of cantharidinate of potash we have no personal experience.

Gentlemen, in reading this paper we have attempted (1st) to bring the important facts of the vital phenomena before you by way of suggestion; (2nd) to describe and show those forms which are of interest to us by way of diagnosis and treatment; and lastly, to draw your attention to the therapeutics. In a subject so wide as this it may be well to ask the expression of the Society in the discussion which is to follow upon a few of the more important points, and in this way we would suggest that we might consider the following:—

(1st) That the Fellows give expression to their views upon the causal connection of these germs; (2nd) that granting this causal connection, what value do they place upon it for diagnostic purposes; (3rd) what

methods, or agents, have they found of most benefit in chronic affections such as tuberculosis, and in acute conditions like diphtheria.

Some time ago I heard our ex-president, Sir Morell Mackenzie, refer to the difficulties which the surgeon or physician now had in following out any pathological investigation, and his view seemed to be that the pathology and etiology must be consigned to those engaged in laboratory work alone. Whilst sympathizing in every sense with this view, it appears to me that the pathologist, after all, is only like one in advance, who prepares us for the application of these discoveries at the bedside. To those engaged in practice like myself it would be needless to claim more, and in this secondary sense only have we ventured to bring this subject before you.

INSTRUMENTS, THERAPEUTICS, AND DIPHTHERIA.

Hall, F. de Haviland (London).—*A Lime-Light Apparatus*. "Brit. Med. Journ.," Dec. 13, 1890.

AN illustrated description of an apparatus for laryngoscopic and rhinoscopic work, made by Messrs. Arnold and Son, West Smithfield, London.

Hunter Mackenzie.

Bresgen (Frankfurt-a-M.).—*A New Chisel and New Sharp Spoon for the Nose, and a New Foot-bellows, with Air Purifying Apparatus*. "Deutsche Med. Woch.," 1891, No. 16.

(1) A NEW double-cutting chisel for removing osseous deviations of the nose. (2) A new sharp spoon for the same purposes. (3) The well-known foot-bellows of the author is combined with an ingenious apparatus for cleansing the air, and the modified Rabierske insufflator. The illustrations must be seen in the original.

Michael.

Brown, Price (Toronto).—*A Laryngeal Applicator*.

THE rod is of aluminium and the guard of silver. It is a light and very convenient instrument, and does well the work expected of an applicator.

George W. Major.

Spencer (Toronto).—*Oxygen Inhalation for Dyspnoea*. Toronto Med. Soc., March 19, 1891.

THE object was to relieve a sudden attack of dyspnoea, which came on in a case of pleurisy, so suddenly that, at the time, it was thought to be due to heart clot. The blueness and distress of breathing disappeared.

George W. Major.

Tate, Walter W. H. (London).—*Death from Suffocation while recovering from Etherisation*. "Brit. Med. Journ.," Mar. 21, 1891.

AFTER the anæsthetic had been suspended for five minutes the patient began to vomit, and during the vomiting he suddenly became cyanosed, and stopped breathing. The operator removed a large piece of undigested meat from the back of the pharynx, but without relieving the breathing. Laryngotomy was accordingly performed, and an attempt made to clear the trachea, without success. At the *post-mortem* exami-

nation it was found that a large mass of partially digested meat was fixed in the lower part of the trachea, extending into the two bronchi, and completely closing the lumen of the tube. It appears that, contrary to instructions, the patient had been permitted by his relatives to partake of a large meal shortly before the performance of the operation.

Hunter Mackenzie.

Bramwell, J. Milne.—*Therapeutics of Hypnotism.* "Brit. Med. Journ.," Feb. 28, 1891. Leeds Med. Chir. Soc., Feb. 6, 1891.

AMONGST others, there was shown a girl, aged about twenty, who, after an attack of rheumatism, was seized with aphemia. She had been treated in many ways, but had remained unable to make the slightest attempt at speaking for three years. Paralysis of the legs subsequently appeared. When the hypnotic state was induced she had a slight unilateral convulsion. On the following day she could walk, and in six days, after a severe attack of sneezing, she regained her voice.

Hunter Mackenzie.

Wilson, Albert.—*The Micro-organisms of Diphtheria.* "Lancet," May 9, 1891, p. 1042.

THE writer criticizes Dr. Klein's recent experiments, inasmuch as that investigator had failed to produce lesions in the pharynx or larynx, or paralysis. Dr. Wilson inoculated tubes from an ordinary case of diphtheria, producing a funnel-shaped depression in the gelatine, with liquefaction, and the formation of an orange-coloured deposit. The germ proved on examination to be a pure cultivation of a small micrococcus. Pigeons were inoculated (under the pectoral muscles) from this culture, and in them true diphtheria was produced, they having both membrane exudation and paralysis. The organisms grew best in a neutral or faintly alkaline medium, and *acids were injurious to their growth.* Growth was prevented by solutions of boracic acid (2 per cent.); salicylate of soda (5 per cent.); peroxide of hydrogen (2 per cent.); hydrochloric acid (2 per cent.); liquor ferri perchloridi (2 per cent.); lactic acid (1 per cent.); corrosive sublimate (1 in 5000); iodine (1 in 500). The following were found *useless*:—Solutions of chlorate of potash (10 per cent.); permanganate of potash (20 per cent.); sulpho-carbolate of sodium (20 per cent.); and sulphurous acid (5 per cent.). He considers diphtheria primarily a constitutional disease, of which the local manifestation was the throat affection; hence the necessity for the combination of internal with local treatment. For the latter purpose he recommends hydrochloric, lactic, and boracic acids, salicylates, and hydrogen peroxide. He finds the injection of pilocarpin (1-25th gr.) useful in loosening membrane. [These observations confirm the opinion held by the reporter, in common with many other observers, as to the extreme value of lactic acid in the local treatment of diphtheria. In addition to its germicide effect, its power of dissolving diphtheritic membrane *in situ*, and in the test-tube, is the well-tried corollary to the fibrin-dissolving properties with which it is credited in the ordinary works on physiology.]

Dundas Grant.

Wassermann and Proskauer (Berlin).—*On the Toxalbumins of the Diphtheria Bacillus.* "Deutsche Med. Woch.," 1891, No. 17.

DESCRIPTION of the methods of the authors for the extraction of a

toxalbumin from the diphtheria bacillus. Experiments to produce immunity in animals were without effect. *Michael.*

Johnston, Wyatt.—*Bacteriological Examination of the Membrane of Diphtheria.*

"Montreal Medico-Chirurgical Society's Transactions," May 1, 1891.

THE writer referred to the difficulty sometimes experienced in making an accurate diagnosis in some cases of exudative sore throat. He maintained that within twenty-four hours a cultivation of the Loeffler bacillus would decide any given case. The bacilli formed whitish colonies, extremely flat, growing concentrically, with slight cupping at the surface of the medium. They were much more numerous, and grew much more rapidly than other bacteria found in the mouth, of which only a few could be cultivated.

The bacillus in diphtheria remained limited to the local lesions, the systemic infection being attributed to the production of a ptomaine, which entered the lymphatics and blood-vessels. Dr. Johnston insisted upon the practical importance of a bacteriological examination in doubtful cases. In two cases, one of pseudo-membrane on the conjunctiva and the other of membrane in the nose, he failed to find Loeffler's bacillus, and in neither case was the clinical history that of diphtheria. He mentioned the results obtained by Welsh and Abbot, of Baltimore, in the examination of eight cases of diphtheria, in all of which the bacillus pathogenic of diphtheria was found. *G. W. Major.*

Pisarzewski.—*A Case of Diphtheria, complicated with Erysipelas.* "Przegląd Lekarski," 1891, No. 1.

THE author had occasion to observe the favourable influence of erysipelas upon diphtheria. The case was that of a child, aged two years, hitherto quite healthy, who was suddenly attacked with severe diphtheria. Notwithstanding the application of the usual drugs, as well as tracheotomy, which was performed on account of laryngeal symptoms, the state of the child became very bad, leaving no chance of recovery; the more so, that symptoms of affection of the lungs appeared. Thirteen hours after the operation (tracheotomy), the temperature rose suddenly to 41.4° C.; the general condition, however, became much better, as well as the local process in the pharynx. On minute examination a strong erysipelatous redness of the skin of the thorax was observed. Two days after, the membranes in the pharynx and also the symptoms of the pulmonary affection disappeared. The general condition improved very greatly; the erysipelas was arrested after four days, and twelve days after the tracheotomy the canula was taken out. The child completely recovered. The complication with erysipelas was probably caused by the author himself, who, at the same time, had under his care a patient with erysipelas. [This is a very interesting case. If further observations should confirm this fact, we ought, in cases of desperate diphtheria of the pharynx and larynx, to try the inoculation of the erysipelatous streptococcus. —*Rep.*] *J. Sedziak.*

Guthrie, L. G. (London). — *The Bulbar Crises of Diphtheritic Paralysis occurring in Children.* "Lancet," April 18, 1891.

THESE are sudden and severe functional disturbances of the vital medullary

centres, often unrecognized, often unexpected, and which often prove fatal. In children with post-diphtheritic paralysis the following symptoms indicate a tendency to bulbar crises :—(1) Marked listlessness and apathy ; (2) a weak, hoarse and nasal voice ; (3) irregular and sighing respiration ; (4) a loose, weak and almost noiseless cough with commencement of accumulation of mucus in the air-passages ; (5) a rapid pulse, together with the other minor signs of diphtheritic paralysis. [In general, signs of vagus and accessory paralysis.—*Rep.*] During a crisis there is sudden exacerbation of all the symptoms. The voice becomes aphonic, respiration becomes alarmingly dyspnoic, the secretion in the air-tubes becomes enormously increased, the temperature rises, and the pulse becomes still more frequent, sometimes even uncountable. There is then usually vomiting. The patient, as a rule, then commences to improve in the first attack, but recurrences are likely to take place, and death may happen from exhaustion, syncope, cardiac thrombosis, or from suffocation due to the accumulation of mucus in the air-passages. These attacks may occur at any time during the first six weeks from the onset of the paralytic symptoms. The pathological condition is probably “parenchymatous” degenerative changes in the nerves (peripheral neuritis) secondary to ganglionic changes (which may be merely transient and slight). At the same time no pathological changes may be discoverable in cases in which extremely slight interference with the function and nutrition of important centres, such as the medullary, may have been the cause of death. The general treatment consists in complete rest in bed during the first six weeks from the onset of paralysis, even in the absence of the warning symptoms before mentioned, with abundant nutritious food and tonics, especially strychnia. During the period of occurrence of crises strychnia and atropia are recommended, the former as a powerful stimulant to the respiratory and cardiac centres, the latter as an arrester of pulmonary and other secretions. The writer would combine one-fiftieth to one-thirtieth of a grain of strychnia with one one-hundred-and-twentieth to one one-hundredth of a grain of atropia in hypodermic injection. The nasal tube should be used and predigested food given by its means as soon as deglutition fails. Rectal alimentation may be also employed. Dr. Guthrie warns against the error of diagnosing such cases (and, when fatal, returning them) as “bronchitis or congestion of the lungs and cardiac syncope,” in children who may have been perfectly well a few hours before death. *Dundas Grant.*

Cross, J. (London).—*Bullous Eruption : Diphtherial Infection.* “*Brit. Med. Journ.*,” Dec. 20, 1890.

A NOTE of the case of a child with a small bulla in the middle line of the neck, just beneath the chin, which extended and ruptured, leaving a grey ulcerated surface about the size of a florin. The child had been exposed to diphtheritic infection, and had what seemed a diphtheritic patch on one of the tonsils. Recovery. *Hunter Mackenzie.*

McPhedran, Alexander (Toronto).—*Primary Laryngeal Diphtheria in the Adult.* “*Canadian Practitioner*,” April 16, 1891.

A REPORT of laryngeal diphtheria treated with tincture of iron and

corrosive sublimate internally, and a local spray of liquor potassii in lime water. Turpentine was also constantly vapourized in the chamber. Within seven days the membranous deposit, which was very profuse, had quite disappeared. The Klebs-Loeffler bacillus is discussed at length. The importance of preserving a healthy condition of the throat, as a means of preventing the development of diphtheria, is also impressed; as also the great value of a bacteriological examination in doubtful cases.

George W. Major.

Cotter, Jeremiah (Cork).—*Tracheotomy for Membranous Croup*. "Brit. Med. Journ.," Jan. 10, 1891. Cork Med. and Surg. Assn., Jan. 10, 1891.

NOTES of the case of a child, aged four and a half years. A soft rubber tube was used a few days subsequent to the operation, and was daily shortened, and removed a fortnight subsequently. Recovery.

Hunter Mackenzie.

Rosenzweig (Neuwied).—*Four Cases of Diphtheritic Paralysis of the Soft Palate cured by Injections of Strychnine*. "Therap. Monats.," April, 1890.

COMMUNICATION of the cases, with a recommendation of the treatment indicated.

Michael.

Knapp, E. M. (Ross).—*The Treatment of Diphtheria*. "Brit. Med. Journ.," Jan. 24, 1891.

THE author believes that the local manifestations of this disease appear after the general infection. He discards all local treatment, and uses constitutional remedies—a germicide, an antipyretic, iron, iodine, soda. The following combination has been used by him with benefit: \mathcal{R} , sodæ salicylatis $\mathfrak{z}\text{ij}$., syr. ferri iodidi $\mathfrak{z}\text{ss}$. aq. ad. $\mathfrak{z}\text{vi}$. One tablespoonful (for an adult) in a wineglassful of water every hour, till the physiological effect of the salicylate manifests itself by the "noises in the head"; afterwards sufficiently often to maintain this effect. No cases (8) so treated have been followed by paralysis or death. *Hunter Mackenzie.*

Fenwick, W. S. (London).—*The Treatment of Diphtheria*. "Brit. Med. Journ.," Feb. 14, 1891.

A NOTE recommendatory of the use of iron, preferably in combination with chlorate of potash.

Hunter Mackenzie.

Jones, Vernon (London).—*The Treatment of Diphtheria*. "Brit. Med. Journ.," Mar. 7, 1891.

THE author recommends the hourly spraying of the fauces and nasopharynx with a saturated solution of biborate and bicarbonate of soda (about 40 grains of each to the ounce of water). *Hunter Mackenzie.*

Manning, N. S. (Birmingham).—*Treatment of Ulcerated Scarlet Fever and Diphtheritic Throats by Irrigation*. "Lancet," April 25, 1891.

THE fluid used is:—Boric acid, 4 parts; glycerine (sp. gr. 1260), 3 parts. This solution is prepared by heating with steam. A tablespoonful is dissolved in about a pint of hot water. This is syringed well into the back

of the mouth and throat every two or four hours, as circumstances require. It is said to be comforting rather than disagreeable. [The administrator would do well to keep well out of the line of fire of the returning stream.—*Rep.*]
Dundas Grant.

Faguet.—*Sluicing in the Treatment of Diphtheritic Paralysis of the Arch of the Palate.* "Journ. de Méd. de Bordeaux," Oct. 26, 1890.

OBSERVATION shows the incontestable advantages of this plan, so well known, but so often neglected. Patients may and *ought* to be fed by an œsophageal wound when the food which they take is rejected partially or completely through the tracheal wound and nasal fossæ. *The introduction of the tube through the nose is much the most advantageous from all points of view*, and especially in intractable children it should be preferred to introducing it through the mouth.
Joal.

Coward, F. A. (Huddersfield).—*Liq. Hyd. Perchlor. in Diphtheria.* "Brit. Med. Journ.," Jan. 3, 1891.

THE following is the formula for a child of three years or upwards :— \mathcal{R} , tr. ferri perchlor. $\mathfrak{z}\text{i}$. ; liq. hyd. perchlor. $\mathfrak{z}\text{i}$. ; glycerine ad. $\mathfrak{z}\text{iii}$. A dessert-spoonful every hour from four to six hours, and then every two, three, or four hours, as the case may require. For an adult : \mathcal{R} , tinct. ferri perchlor. $\mathfrak{z}\text{ii}$. ; liq. hyd. perchlor. $\mathfrak{z}\text{i}$. ; glycerine $\mathfrak{z}\text{ss}$. ; sol. pot. chlor. ad. $\mathfrak{z}\text{viii}$. Two table-spoonfuls each hour, and repeated as in the case of the child. Local treatment is not necessary. The result is "in most cases, after four or five doses, the membrane becomes dull and soft ; by the end of twenty-four hours it is almost like mucus, and ready for expectoration ; by the end of forty-eight hours nothing but an inflamed sore throat remains." The author mentions that in an obstinate case, aged seven, he gave a drachm of the perchloride every hour for thirty-two hours without any evil result. He has never yet met with a case of salivation, and has not seen diphtheritic paralysis ensue when it has been employed.
Hunter Mackenzie.

Holt, H. M. (Norton, Yorks).—*Liq. Hydrarg. Perchlor. in Diphtheria.* "Brit. Med. Journ.," Jan. 31, 1891.

THE author recommends this drug, combined with arsenic (Fowler's solution).
Hunter Mackenzie.

Rosenzweig, W. (Neuwied).—*Strychnine Injections in Post-Diphtheritic Paralysis.* "Lancet," May 9, 1891, p. 1060.

FOUR cases of paralysis of the soft palate following diphtheria in children of from six to twelve years old. Doses of from 2 to 3 milligrammes [grain $\frac{1}{33}$ to $\frac{1}{51}$.—*Rep.*] were injected into the neck daily. Rapid cures took place in not more than a week.
Dundas Grant.

THE TREATMENT OF TUBERCULOSIS. (KOCH-LIEBREICH, &c.)

KERNIG (St. Petersburg)—*Koch's Treatment of Laryngeal Tuberculosis*. "Petersburger Med. Woch." 1891, No. 12—reports: (1) A patient, nineteen years old, with tuberculosis of the lungs, and a tuberculous ulcer on the left vocal band, had four injections of 0'0005 and 0'002. Severe deterioration of the whole condition, with high fever and loss of weight, followed. (2) A patient, twenty-eight years old, with tuberculosis of the lung, ulceration on the left vocal band and hoarseness, had five injections of 0'001—005. Improvement followed.

WESTPHALEN (St. Petersburg)—"Petersburger Med. Woch.," 1891, No. 12—reports the results of the *post-mortem* examination of a patient treated by Koch's injections. (1) The patient was thirty years old, and had tuberculosis of the lungs and larynx; nine injections were made. The phthisis became florid and death resulted. At the *post-mortem* examination, miliary tuberculosis of the lungs, pleura, spleen, liver and kidneys was found, and a tuberculous ulcer of the epiglottis; the whole larynx was converted into a large tuberculous ulceration; the mucous membrane of the trachea and bronchi were covered with numerous miliary tubercles. (2) A patient, forty two years old, had tuberculosis of the lungs and larynx, combined with inveterate syphilis. Treatment with nine injections, was followed by death. Miliary tuberculosis of the lungs, liver, kidneys and bowels was found, with luetic cicatrices on the tongue and pharynx, and tuberculous ulcer of the epiglottis and the vocal bands. (3) A patient, thirty-six years old, with tuberculosis of the lungs, and swelling and redness of the larynx without ulceration. Six injections were performed. Sudden tubercular meningitis occurred after the last injection; death followed. *Post-mortem* examination revealed universal miliary tuberculosis with swelling of the mucous membrane of the larynx, with some greyish nodules, and an ulcer of the left vocal band.

SCHMIDT, MORITZ (Frankfurt-a-M.)—"Deutsche Med. Woch.," 1891, No. 17—reported at the "Xte Congress für innere Medizin," his results of the treatment of thirty-nine cases. (In seven other cases treated and cured by curettement the injections gave no local reaction.) Of the thirty-nine were twenty slight cases with simple infiltrations or superficial ulcerations. Of these eighteen were cured; of twenty-two grave cases seven were cured and one improved. The author recommends Koch's treatment, and believes that the *bad results of others* are caused by too many and too strong injections. *Michael.*

Felici, Francis.—"Bollettino delle Malattie dell' Orecchio, della Gola e del Naso," March, 1891.

THE author makes the following observations in reference to twenty-five cases in the Medical Clinic at Rome inoculated with Koch's lymph, and

occupies himself exclusively in noting the effects of the new method of cure in laryngeal tuberculosis.

To facilitate description, Dr. Felici divides his cases into three groups :—(1st.) Tuberculosis with a normal larynx, in which there was no reaction in this organ. (2nd.) Tuberculosis with a normal larynx, in which there was a local reaction. (3rd.) Tuberculosis with various lesions of the larynx, in which there followed a local reaction in various forms. He describes the results as observed in all the cases by means of the laryngoscope, from the day of inoculation until that of the patient's discharge from the clinic, or until the day in which this report was written. According to Dr. Felici's observations, the action of the lymph appears to consist in the provocation of a local phlogosis, which manifests itself in a swelling of the part, which assumes a more or less red colour, with augmented secretion over the ulcerated surfaces, which little by little resolve and give place to a new formation of tissue. If instead there exist in the larynx a non-visible tubercular focus, this manifests itself with repeated injections, first by hyperæmia, and then by a real ulceration: the hyperæmia may be transitory and not give rise to any alteration of the tissues. In those cases in which there were lesions of the larynx the reaction took place between twenty-four and forty-eight hours, therefore in a relatively short lapse of time, but afterwards the effects in certain cases remained stationary. Dr. Felici closes his work with the promise to report impartially other results, in order to come to practical conclusions.

Grazzi.

Krynski.—*The behaviour of Tubercle Bacilli in Lupus under the influence of Koch's Lymph.* "Przegląd Lekarski," 1891, No. 10.

THE presence of tubercle bacilli in the tissues of lupus is very difficult to discover. The author relates a case of lupus of the face, observed in the clinic of Prof. Rydygier, in Cracow, in which, after the application of Koch's method of treatment, he found an enormous number of bacilli in the tissues, where before he was unable to discover any. It was especially the case after the third injection of Koch's fluid. This case proves that Koch's lymph produces a rapid multiplication of tubercle bacilli in tissues. These bacilli, penetrating the superficial layers of the skin attacked by lupus, are eliminated together with them. They can also penetrate in the opposite direction, *i.e.*, deep into the tissues, where, after having found a convenient ground for their development, they can form a new tubercular focus.

J. Sedziak.

Swiatkowski.—*The Treatment of Lupus of the Skin with Koch's Lymph.* "Przegląd Lekarski," 1891, No. 10.

THE observations came from the clinic of skin and syphilitic diseases of Dr. Krowczynski, in Lemberg. Among several more or less unsuccessful observations one deserves to be mentioned, in which syphilitic changes (papulæ) already after two injections (on the third day) entirely disappeared. Basing his opinion upon his observations, the author looks sceptically upon the new method [with which I entirely agree—*Rep.*].

J. Sedziak.

Guttmann, Paul.—*Liebreich's Treatment of Laryngeal Phthisis.* Berliner Medicinische Gesellschaft, Meeting, Mar. 18, 1891.

THE author says that the medicament must be used with great precaution so as to avoid irritation of the kidneys and the bladder, and albuminuria. In three cases out of seven treated by him there were symptoms of intoxication, especially anuria.

LUBLINSKI has treated twenty-three cases, and has observed in six cases slight symptoms of strangury, but never grave symptoms. He believes that the cases selected by Guttmann were so nearly dying that they could not be used as arguments against the application of the medicament. Concerning the effect, he has seen good results in cases of laryngeal tuberculosis which are not too much advanced.

B. FRAENKEL proposes the use of only very small doses, and has never seen severe intoxication. Michael.

Brown, Price (Toronto).—*The Shurly-Gibbes Treatment of Pulmonary Tuberculosis, with a Report of Cases.* Toronto Med. Soc., Feb. 5, 1891.

THE treatment may be said to consist in the inhalation of chlorine in some form, rendering the gas as unirritating as possible, and the hypodermic use of solutions of iodine or chloride of gold. The results are considered satisfactory. George W. Major.

MOUTH, TONGUE, PHARYNX, ŒSOPHAGUS, &c.

Zander, Adolf Th. (Perm.)—*Submaxillary Dermoid Cyst.* "Khürürgitchesky Vestnik," Dec. 1890, p. 742.

A PEASANT man, aged thirty, consulted the author for a smooth, fluctuating tumour of the size of a male fist, occupying the whole right submaxillary region, and protruding into the oral cavity. It was not adherent to the skin. According to the patient's statement, about seven years previously the cyst had been tapped, some fluid contents having been removed; it had been filled up again, however, to steadily grow ever since. The tumour was easily extirpated through an incision into the submaxillary region, the wound speedily healing *per primam*. The cyst was found to contain serous fluid, with a large quantity of hairs and solid fat.

Valerius Idelson.

Zander, Adolf Th. (Perm.)—*Suppurative Parotitis.* "Khürürgitchesky Vestnik," Dec., 1890, p. 733.

THE author, house surgeon to the local Zemsky Hospital, records a series of seventeen cases, of which sixteen refer to peasant men and one to a woman. Of the number, in twelve the right parotid was inflamed, in four the left, and in one both were involved. In two cases the disease developed after typhoid fever, in one after scarlatina, while in fourteen

the cause remained unknown, the affection suddenly appearing in previously perfectly healthy subjects. Of the seventeen cases, five ended in death, three succumbing to septicæmia, and two to supervening croupous pneumonia. Of the septicæmic cases, one was that of a previously robust old man of seventy, with double parotitis, who came to the hospital with all symptoms of blood-poisoning. In two mild cases a spontaneous recovery ensued. Two patients were admitted after the abscesses had already burst both into the mouth and through the facial integuments. In the remaining thirteen cases the gatherings were opened immediately after their appearance, in a majority of the patients the treatment being followed by rapid defervescence and complete recovery.

Valerius Idelson.

Rundle, Edmund (Cornwall).—*Sol. Hydrarg. Perchlor. in Cancrum Oris.*

"*Brit. Med. Journ.*," Feb. 14, 1891.

THE author recommends the local application of this drug, and records two cases in which an "almost magical" effect resulted from its employment.

Hunter Mackenzie.

Zander, Adolf Th. (Perm).—*Congenital Sublingual Lipoma.* "*Khîrûrgitchesky Vestnik*," Dec. 1890, p. 742.

A PEASANT boy, aged three, was admitted on account of a steadily increasing sublingual swelling, which had been first noticed shortly after his birth. On examination, the whole oral cavity was found to be filled up with a soft tumour, of the size of an apple, which was partly protruding from the mouth, carrying the tongue (in a normal condition) on its top. It was covered with a smooth and but slightly movable mucous membrane, traversed here and there with old scars. The lower teeth were inclined forwards. The new growth was extirpated very easily, the wound rapidly healing without any complications. The tumour proved to be an encapsulated lipoma fibrosum.

Valerius Idelson.

Barker, Arthur (London).—*Dermoid Tumours of the Tongue.* Clin. Soc. of London, Nov. 28, 1890. "*Brit. Med. Journ.*," Dec. 6, 1890.

NOTES of two cases were read, one central, the other lateral—both large. Both were operated on, the one by a submental vertical incision, the other by the mouth. The necessity of removing these tumours in their entirety was pointed out, for if their contents escaped into the surrounding cellular tissue, they set up a violent inflammation.

Hunter Mackenzie.

Spencer (Toronto).—*A Case of Macro-Glossia.* Toronto Med. Soc., March 19, 1891.

THE tongue protruded between the lips and teeth, and could not be drawn into the mouth. The patient was a child of three years. The lower and upper extremities were unusually large, simulating elephantiasis. The patient has a sister, aged nine years, in a very similar condition.

George W. Major.

Schaede (Königsberg).—*Hypertrophy of the Lingual Tonsil and its Treatment.* "*Berliner Klin. Woch.*," 1891, No. 13.

DESCRIPTION of six cases. The patients have mostly the feeling of a

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foreign body in the throat or difficulty in singing. The disorder should only be treated if it cause symptoms. This treatment consists in the application of tincture of iodine, destruction by chemical caustics or burning, and in marked cases removal with the galvano-cautery wire.

Michael.

Baber, E. Cresswell (Brighton).—*Tumour of Tonsil*. "Brit. Med. Journ.," Feb. 7, 1891. Brighton Med. Chir. Soc., Dec. 4, 1890.

EXHIBITION of a girl, aged fourteen, with a large tumour of the right tonsil, and ulceration on the right faucial pillar. Several pieces had been removed from the right tonsil, and had grown again. There were enlarged glands in the axillæ and groin, and also over the tonsil. The left tonsil had become enlarged again after excision. A provisional diagnosis of lympho-sarcoma had been made.

Hunter Mackenzie.

Toison.—*Note on a Process of performing Amygdalotomy rapidly, and without Hemorrhage*. "Lille Medical," Oct., 1890.

IN cases where the tonsils have considerable volume, and cannot be destroyed by the galvano-cautery, the author removes them with an apparatus composed essentially of a cold snare. But the extremity of the wire loop, instead of being free, is fixed by three silk threads, easily broken, on to a soft ring at the free end of the conducting shank for the wire. In order to operate it is necessary to engage the tonsil in the ring which carries the loop, and then to draw upon the opposite ends of the metallic thread, and at the moment when this traction is made the silk threads are broken, the wire disengaged, and it cuts little by little the tonsil previously fixed with a pair of Museux's forceps. The author has removed many tonsils in this manner without hæmorrhage. *Joal.*

Barling (Birmingham).—*Lupus of Palate and Larynx*. "Brit. Med. Journ.," Feb. 7, 1891. Midland Med. Soc., Jan. 14, 1891.

EXHIBITION of a woman, aged twenty-five, with lupus of the palate and larynx without skin lupus. The disease had commenced in the pharynx five years previously, and extended upwards and downwards. The local application of a 75 per cent. solution of lactic acid had produced no effect. It was now intended to use Koch's lymph.

Hunter Mackenzie.

Kempe, Arthur (Exeter).—*Syphilitic Stricture of the Œsophagus*. "Brit. Med. Journ.," Dec. 27, 1890. S. W. Branch B.M.A., Oct. 17, 1890.

THE patient, a woman aged thirty-six, had extensive destruction of the hard and soft palate, uvula, &c.; a deep sloughy ulcer on the posterior wall of the pharynx, and a tight ulcer of the Œsophagus, about four inches further down. The patient was treated successfully by catheterization.

Hunter Mackenzie.

Symonds, Charters (London).—*Œsophageal Stricture*. "Brit. Med. Journ.," March 7, 1891. Clin. Soc. of Lon., Feb. 27, 1891.

EXHIBITION of two cases in men suffering from general paralysis. One had a peculiarly high-pitched tone of the voice, owing to paralysis of the left side of the larynx.

Hunter Mackenzie.

Machell (Toronto).—*Imperforate Œsophagus*. Toronto Med. Soc., Jan. 29, 1891.

At birth the child was unable to nurse. *Post-mortem*.—The œsophagus was found to end in a *cul-de-sac*. A portion was patent extending up from the stomach, but did not communicate with the tube above. There was, however, a communication between the lower œsophagus and the trachea; so that on passing the probe downwards through the glottis it could be made to enter the œsophagus and to pass on into the stomach.

George W. Major.

Shaw, Lauriston (London).—*Malignant Disease of the Œsophagus*. "Brit. Med. Journ.," March 21, 1891. Path. Soc. of London, March 17, 1891.

SPECIMENS from two cases were exhibited—one a primary sarcoma (rare), which perforated the posterior wall of the trachea just above its bifurcation, and the other an ordinary squamous-celled epithelioma, which, by protruding into the lumen of the gullet, produced œsophageal obstruction.

Hunter Mackenzie.

Hadden, W. B. (London).—*Carcinomatous Ulceration of Œsophagus opening into the Aortic Arch and Trachea*. "Brit. Med. Journ.," Feb. 21, 1891. Path. Soc. of Lond., Feb. 17, 1891.

CARD specimen.

Hunter Mackenzie.

Cahill, J. (London).—*A Tumour involving Œsophagus and Trachea in the Neck*. "Brit. Med. Journ.," Dec. 20, 1890. Path. Soc. of Lond., Dec. 16, 1890.

EXHIBITION of specimen taken from a woman aged forty-nine. Immediately below the level of the cricoid was a tumour about two inches in length, embracing the œsophagus and the sides of the trachea. The growth penetrated the œsophagus, in which it formed a fungus constriction of the calibre of a No. 6 catheter. It penetrated the trachea posteriorly, and at the sides. There was another and larger tumour immediately below the bifurcation of the trachea, adherent to the bronchi and pulmonary vessels, partly caseous and apparently lymphomatous. The patient suffered from increasing dysphagia and dyspnoea for six months before death. Paralysis of the right vocal cord appeared four months before death; both vocal cords were affected two months later. On microscopical examination, the growths appeared to be of a lymphomatous nature. Mr. Bowlby thought the microscopical characters pointed in the direction of epithelioma.

Hunter Mackenzie.

Vince, J. F. (Birmingham).—*Congenital Malformation of the Œsophagus*. "Brit. Med. Journ.," Jan. 3, 1891.

THE œsophagus ended in a pouch-like dilatation an inch and a half below the laryngeal orifice. From the extremity of the pouch a fibrous, cord-like prolongation could be traced for about two inches. The gastric extremity of the œsophagus was represented by a muscular tube of about the normal calibre below, but becoming smaller and thinner as it passed upwards behind the œsophageal pouch, and finally opened into the trachea in the fibrous space between the cricoid cartilage and the first tracheal ring.

Hunter Mackenzie.

Chavasse, T. F. (Birmingham).—*Diverticulum of the Œsophagus.* "Brit. Med. Journ.," Jan. 24, 1891. Path. Soc. of Lond., Jan. 20, 1891.

EXHIBITION of specimen from a man, aged forty-nine, upon whom gastrotomy had been performed. The patient had a ten years' history of dysphagia. There existed a posterior diverticulum, four inches in depth from the level of the arytenoid cartilage, three and a half inches in breadth, and two and a half inches in thickness, with a mouth one inch in diameter, and a capacity of six ounces. When filled with fluid the opening in the œsophagus was firmly closed by the pressure of the distended sac. No malignant disease. It was pointed out that the absence of muscular tissue, except at the mouth of the sac, supported the contention of Zenker and Von Ziemssen that these posterior diverticula were primarily due to the effects of pressure, and not to a congenital defect, as some supposed.

Hunter Mackenzie.

Leichtenstern (Köln).—*Contribution to the Pathology of the Œsophagus.* "Deutsche Med. Woch.," 1891, Nos. 14 and 15.

(1) *Enormous Sacciform Dilatation of the Œsophagus without Mechanical Stenosis in a Case of Hysterical Vomiting lasting Seven Years.*—A girl, nineteen years old, had vomiting for seven years. The physicians who treated her thought that the vomiting was hysterical, because it was always easy to introduce a bougie into the stomach. Only one of them found a stenosis of the cardia. She was greatly emaciated, and vomited all she ate and drank. The vomited mass had generally no acid reaction, and was thus proved to come from the œsophagus. She died from inanition. The *post-mortem* examination showed an enormous dilatation of the œsophagus and a spasmodic contraction of the cardia (the autopsy was made two hours after death!). There was no diverticulum, no cicatrix or other pathological change. The muscular coat was enormously hypertrophied. The author very lengthily and warmly defends his theory that in this case there was nothing but a chronic hysterical spasm of the cardiac portion of the œsophagus.

(2) *Traction-diverticulum of the Œsophagus; Perforation into the Lung; Death from Gangrene of the Lungs.*—*Intra vitam*, only the gangrene of the lungs could be diagnosed; the cause of the gangrene was only found by *post-mortem* examination.

(3) *Cicatricial Stenosis of the Œsophagus caused by Adhesion with Melanotic Lymphoid Glands and their perforation into the Œsophagus.*—Demonstration of the specimen of a patient who died from inanition arising from the impossibility of introducing anything through the stenosed œsophagus.

(4) *Carcinoma Œsophagi; Cancroid Thrombosis of the Vena Azygos; continuation of the Thrombus into the Vena Cava Superior, the Right Auricle and Ventricle.*—In a patient who died from stenosis of the œsophagus the above-mentioned pathological condition was found, combined with progressive tuberculosis of the larynx and the lungs. *Michael.*

Morse, Thomas H. (Norwich).—*Case of Œsophagotomy.* "Brit. Med. Journ.," Feb. 21, 1891.

THE operation was successfully performed on account of the impaction

of a piece of the bone of a fowl, six and a half inches from the teeth. The author remarks that should a similar case occur to him, he would feel much inclined to suture the œsophageal wound. *Hunter Mackenzie.*

Furner, Willoughby (West Brighton).—*A Successful Case of Œsophagotomy for Removal of a Tooth-plate Impacted in the Œsophagus for Five Years and Four Months.* "Lancet," May 2, 1891.

THE plate was swallowed on May 4th, 1884, and the patient had dysphagia varying in degree, but always present. Examination was apparently, first made November 6th, 1889, when a probang met with obstruction ten inches and a half from the teeth. A coin catcher got hold, but traction only seemed to tilt the plate into the surrounding tissues; a pair of long œsophageal forceps gripped it firmly, but slipped off. Œsophagotomy was performed on the left side on February 17th. On passing the finger into the wound, the foreign body could just be reached lying somewhat obliquely to the canal of the tube, the upper part projecting into the canal, the rest of the plate lying in a sac to the right of the gullet. It was extracted by means of strong forceps used with considerable force. The œsophagus was not sutured, and a drainage tube reaching up to it was inserted. The wound was frequently syringed with boric acid solution, some of which the patient was directed to swallow occasionally. No nourishment was given by the mouth during the first two days, but four ounces of pancreatized beef-tea were administered per rectum every four hours. In spite of all the wound became offensive. On the third day a gum elastic catheter was passed down from the mouth, but it produced retching. On the morning of the fifth day another attempt was made with similar want of success, and the conditions locally and generally got worse. In the evening it was determined to let the patient take some milk in the natural way, and she swallowed ten ounces, only a teaspoonful coming through the wound. She then gradually recovered, and on the twenty-eighth day the wound was healed.

Mr. Furner discusses the various plans of after-treatment, and makes the suggestions that the patient should be fed for the first twenty-four hours by nutrient enemata, and then be allowed to swallow milk in the sitting position. If the opening be made in the posterior wall of the œsophagus very little milk escapes by the wound, which may likewise be frequently syringed out with 1 to 40 carbolic solution (boric acid being insufficient). *Dundas Grant.*

NOSE AND NASO-PHARYNX.

Wagnier.—*Coryza Caseosa.* "Revue de Laryngol.," Oct. 15, 1890.

THE interesting case of a woman, aged thirty-three, who at the termination of an influenza was seized with a nasal affection, dating from five months previously to consulting the author. She had first suffered with frontal and facial pain, with shivering and fever. The nose was blocked

and a purulent secretion flowed from the right naris, a tumour being formed in the mouth ; on the palatine vault was a tumefaction presenting two openings, whence issued a very thick liquid. A probe penetrated into the nasal cavity. The left naris was nearly free. The right nasal fossa was completely obstructed, the deviated septum touched the anterior portion of the lower turbinated, a perforation of the septum was found ; posterior rhinoscopy revealed nothing abnormal. Wagnier first thought of syphilis. Then exploring anew with a probe, he withdrew from the right nasal fossa some caseous matter. Douches were employed without result. The air douche was then employed, and at the first inflation the woman ejected by the mouth a caseous mass as large as a big nut. By other inflations the quantity expelled filled the half of a large glass. Six days after cleansing the nose the fistulæ of the septum and palate were closed. The rejected matter was composed of a magma of granular *débris*, with a multitude of bacteria, and a large number of needle-shaped crystals.

Wagnier thinks that the formation of these matters is of inflammatory origin, and consecutive to influenza. *Joal.*

Téré. — *Reflex Sneezing from Luminous Excitation.* "Soc. de Biol.," Oct. 25, 1890.

THE author, illuminating his four lachrymal points, has found that he can expose himself to the light without sneezing, but as soon as the lachrymal points had assumed their normal condition flow of tears followed, and sneezing was produced, whence he draws the conclusion that there is normally a double excitation—stimulation of the retina leading to weeping, and excitation of the nasal mucous membrane by the contact of the tears. *Joal.*

Lightfoot, C. L. (Newcastle-on-Tyne). *Lupus of the Nose.* "Brit. Med. Journ.," Jan. 24, 1891. Northumberland, &c., Med. Soc., Jan. 8, 1891.

EXHIBITION of a girl who had been treated for this disease three years ago by free scraping, followed by the application of equal parts of lactic acid and kaolin. The wound healed in a week, and had remained sound ever since. *Hunter Mackenzie.*

Little, T. E. (Dublin).—*Rhinolith.* "Brit. Med. Journ.," March 7th, 1891. Roy. Acad. of Med. in Ireland, Section of Pathology, Feb. 20, 1891.

EXHIBITION of some fragments of a nasal concretion and rhinolith, which had been extracted from the posterior nares after a severe attack of sneezing. An insignificant nasal discharge and occasional epistaxis were the symptoms present. *Hunter Mackenzie.*

Pogorielsky.—*Chronic Acid in Epistaxis.* "Therap. Monats.," Feb., 1890.

RECOMMENDATION of the treatment of bleedings from venous ectasis of the septum by cauterizing with this medicament. *Michael.*

Winckler (Bremen).—*Remarks on the Treatment of Stuttering.* "Wiener Med. Woch.," 1891, Nos. 13 and 14.

COMMUNICATION of some cases combined with nasal diseases, and

cured by removing adenoid vegetations and other obstructions of the nose. *Michael.*

Barker, A. E. (London).—*Malignant Polypus of the Nose.* "Brit. Med. Journ.," Mar. 21, 1891. Path. Soc. of Lond., Mar. 17, 1891.

AN account of this case was given. A lady, aged forty, had had polypus of the nose for about a year. It appeared to be an ordinary polypus, except for some small hæmorrhagic spots on its surface. Its removal in pieces was followed by profuse hæmorrhage. It recurred in six or eight weeks; secondary growths in the cheek and throat also now appeared. Death ensued in a few months from its recurrence. The specimen was a very uncommon one, and appeared to agree most nearly with the class of carcinoma myxomatodes.

Mr. Bowlby mentioned two cases with a somewhat similar clinical history. The first was a lad, aged nineteen, with nasal polypus, and in whom the operation of removal was followed by profuse hæmorrhage. Recurrence in thirteen months, followed by meningitis and death. The growth was a sarcoma, with a myxomatous basis. In the second case, death ensued from meningitis, by extension through the ethmoid after operation, followed by severe bleeding. The growth was a sarcoma. Another case of sarcoma was also referred to which had twice been removed—on the later occasion with evident success, as recurrence had not again taken place. Severe hæmorrhage after operation had been a feature in this case also.

Hunter Mackenzie.

Sedziak.—*Deviations of the Nasal Septum.* "Przegląd Lekarski," 1891, Nos. 6, 7, 9, 12, 13, 14.

A POLISH translation of the papers published in the "Journal of Laryngology," 1891, Nos. 3 and 4. *J. Sedziak.*

Bronner, Adolph (Bradford).—*Trephining Septum Nasi in Deviation.* Leeds Med. Chir. Soc., Nov. 21, 1890. "Brit. Med. Journ.," Dec. 6, 1890.

EXHIBITION of a case in which the nasal septum had been trephined for deviation due to a fall thirty-eight years previously. After several minims of a 20 per cent. solution of cocaine had been injected under the mucous membrane of the septum, the operation was painlessly performed by means of a cutting trephine attached to the dental engine, and a perfectly free passage through the nostril resulted.

Hunter Mackenzie.

Meyes (Amsterdam).—*Case of Bipartition of the Anterior Part of the Lower Turbinate Body.*—"Monats. für Ohrenheilk.," 1891, No. 3.

DESCRIPTION of a case showing this anomaly. *Michael.*

Onodi (Budapesth).—*Cases of Anosmia.* "Monats. für Ohrenheilk.," March, 1891.

(1) A PHYSICIAN, thirty-seven years old, suffering from chronic coryza, had always the olfactory sensation of musk and petroleum. Cure was effected by the galvano-cautery. (2) A lady had the olfactory sensation of burnt hair, and was cured by the galvano-cautery. Some other cases the author has observed during the epidemic of influenza. *Michael.*

Baracz (Lemberg).—*Operation for Naso-Pharyngeal Polypi.* "Centralbl. für Chirurgie," 1891, No. 16.

THE author proposes a combination of the methods of Furneaux Jordan, and König, which he applied in the following case :—A patient, twenty-five years old, had had for a year obstruction of both nasal cavities, headache, and deafness. The face was broadened. From the right nasal cavity projected a tumour, and the soft palate was protruded. The nasopharynx was filled with a tumour of the size of an egg. Operation was performed under cocaine anæsthesia. An incision was made from the root of the nose and dividing the upper lip; osseo-plastic resection of the right nasal bone was performed, and the tumour enucleated. Iodoform gauze tampons were employed, and the parts sutured. Cure resulted without recurrence. Microscopic diagnosis: small round-celled sarcoma.

Michael.

LARYNX, &c.

Baginsky.—*Intubation of the Larynx.* Berliner Med. Gesellschaft, Meeting, April 15, 1891.

THE author has treated fifteen cases with this method. In the few hours after the application of the tube there is always some improvement, but in the majority of the cases the dyspnœa returns—the tube must often be changed—and the children die from increasing dyspnœa. Of five cases in which the intubation alone was performed, four died, and one was cured. In seven cases tracheotomy followed the intubation, but only one of these cases was cured. Intubation, therefore, cannot compare with tracheotomy. But in cases of impossibility of removal of the canula the method may be adopted. Decubitus has not been observed in these cases.

SCHWALBE has observed grave cases of decubitus.

ROSENBERG defends the method.

Michael.

Compaired, C.—*Catamenial Hæmorrhages of the Larynx.* "Bollettino delle Malattie dell' Orecchio della Gola e del Naso," April, 1891.

THE author summarily reports two characteristic cases of catamenial hæmorrhages published by Rault and Moure, and then describes what he was able to observe in two cases suffering from periodical laryngeal hæmorrhage.

Dr. Compaired has written this work specially to discuss the point whether the emission of blood, which takes place sometimes from the larynx during the menstrual period, must be considered as a true and proper *laryngeal hæmorrhage*, and whether such lesion must be included in the pathology of the vocal organ. He is of opinion that the denomination "*laryngeal hæmorrhage*" is improper, because an objective examination does not show any breakage of capillaries or other appreciable lesions in the vocal organ.

He proposes to call such morbid phenomenon *sanguino-laryngeal*

extravasation, be it or not of catamenial origin, being producible from various infirmities. Furthermore, he says that the sanguino-catamenial extravasation from the larynx does not provoke any local phenomenon of any given importance, and that after the lapse of the days indispensable to the physiological functions of the utero-ovarian apparatus, there does not remain in the larynx or pharynx any pathological condition. He therefore concludes that this alteration cannot be considered as a true and proper disease of the vocal organ. *Grazzi.*

Przeborski (Lodz).—*Etiology, Diagnosis and Therapeutics of Prolapsus vel Hernia Ventriculi Morgagni.* "Monats. für Ohrenheilk.," 1890, Nos. 1, 2, and 3.

CASES of these rare conditions have up to now been related only by Massei, Jelenffy, and Major. The author has observed two cases. (1) A patient, thirty-six years old : hoarse, only able to speak a short time, and then becoming aphonic. The laryngoscope showed that if the patient spoke for a long time a tumour arose and filled out the space between the vocal bands. The tumour was reddish, parallel to the vocal band, and arose between that and the ventricular band, and could therefore be nothing more than the everted ventricle. The mucous membrane of the arytenoid cartilages was also swollen. Treatment by lactic acid, and later by chromic acid, ended in cure. (2) A patient, sixty-five years old ; emphysematous and coughing for some years, became hoarse. The laryngoscope showed the vocal bands to be covered with six red tumours, from the size of a pea to that of a cherry. When the tumours which arose from the ventricles of Morgagni were removed the patient was very much improved. The tumours consisted of duplications of the mucous membrane. *Michael.*

Eliasberg, S. S. (Minsk).—*Spontaneous Disappearance of Laryngeal Papillomata after Tracheotomy.* "Meditzinskiĭ Obozreniĭ," 1891, No. 1, p. 46.

THE author details a highly interesting and instructive case of the following kind : A pale and emaciated boy, aged ten, sought his advice on account of aphonia and ever-increasing severe dyspnœa in December, 1887. The laryngoscope showed that about two-thirds of the free edge and lower surface of the left true vocal cord and the anterior commissure were occupied by a great number of greyish, sessile, small-sized papillomata, grouped in a cauliflower fashion, and considerably blocking up the vocal slit. The embarrassment of breathing growing from bad to worse, on December 15th thyrotomy (by a median incision involving only the lower half of the cartilage) was performed, and the whole mass of the new growths removed, partly with scissors, partly with a sharp spoon ; after which the raw surface was cauterized by means of Paquelin's instrument, the upper portion of the wound closed with sutures, and a tube inserted into the lower angle of the incision. In the beginning of February, 1888, the papillomata recurred (in the same situation), the larynx swiftly resuming its previous condition. In April Professor Kosinski, of Warsaw, once more performed thyrotomy, removing this time the neoplasms, together with the left vocal cord. The incision was allowed to close. On examination of the patient by the author on

May 13th, the larynx proved to be perfectly clean, but about the end of the month rapidly-growing papillomata returned, occupying now both the site of the left cord and the epiglottis. On June 26th an alarming asphyxia occurred, necessitating tracheotomy. In a month or so, "the whole organ became literally blocked up with the tumours." For two months the condition remained stationary, but from the beginning of October the new growths commenced to gradually dwindle away, while, from time to time, the patient was expectorating "bits of flesh" (as his mother put it), which under the microscope proved to be nothing else than papillomata.

About the end of December, 1888, not the slightest trace of any tumours could be discovered, the organ proving to be absolutely clean. No relapse occurred up to the present (about two years elapsed). The boy was wearing a tracheotomy canula up to March 4th, 1890, when it was removed on account of its giving rise to considerable local irritation, cough, and an abundant development of bleeding granulations about the wound. On the site of the left cord there gradually formed a cicatricial band, which, on phonation, was playing the part of a vocal cord (though an "immobile one"). The patient was "speaking in a distinct, though somewhat harsh, voice, and even could sing fairly tolerably."

According to Dr. Eliasberg, this is only the fourth instance (in international literature) of a spontaneous disappearance of laryngeal papillomata, the other three having been reported by Professor Oertel (two cases quoted by Dr. Melchior Hopfmann, in Volkmann's *Sammlung Klinischer Vorträge*, No. 315, p. 2807) and Dr. Hunter Mackenzie (*vide* the JOURNAL OF LARYNGOLOGY, 1890, April and June, pages 168 and 259).

Analyzing the cases, and pointing to highly unsatisfactory results obtained from the so-called "radical" operation, the author suggests that laryngeal papillomata should be treated by tracheotomy. It is just possible, he thinks, that the elimination of the larynx from the respiratory process might remove some irritant factors which give rise to a primary development of papillomata, and their subsequent, usually so obstinate, recurrences.

Valerius Idelson.

Lodge, Samuel.—*Case of Papillomatous Growth on the Left Vocal Cord.* Leeds Med. Chir. Soc., Nov. 21, 1890. "Brit. Med. Journ.," Nov. 6, 1890.

EXHIBITION of a girl, aged twenty-three years, in whom hoarseness, due to the presence of this growth, had existed for five or six years.

Hunter Mackenzie.

Bornemann (Berlin).—*Cases of Multiple Laryngeal Papillomata in Children.* "Deutsche Med. Woch.," 1891, No. 15.

THE author relates four cases which he has observed in B. Fraenkel's clinic. (1) A child, four and a half years old, was treated by crico-tracheotomy on account of papillomata stenosing the larynx. The canula could not be removed for two years. During narcosis some papillomata were removed *per vias naturales*, but without effect. Laryngo-fissure was performed with removal of the neoplasm. Cure resulted, but a bad voice remained. (2) A child, fourteen months old, had been dyspnœic

for six weeks; tracheotomy and laryngo-fissure, with removal of the neoplasms by sharp spoon and forceps, were performed. The canula could not be removed. Death occurred from pneumonia some months later. The larynx was filled by recurring neoplasms, which obliterated the larynx. (3) A child, six years old, had been hoarse for three years. The laryngoscope showed the larynx to be filled with neoplasms. A successful operation was performed with forceps specially modified for this case. (4) A patient, twelve years old, whose larynx was filled with papillomata. Removal of some pieces. Some time later thyrotomy and destruction of the neoplasms by the sharp spoon and Pacquelin cautery were performed. Some months later he was still wearing the canula, and showed beginning recurrence. The intra-laryngeal operations were continued, and the patient is yet under treatment. The author concludes that, if possible, endo-laryngeal treatment must be preferred to surgical measures.

Michael.

Hovell, T. Mark (London).—*Multiple Papilloma of Larynx removed by Forceps.* "Brit. Med. Journ.," Feb. 1, 1891. Hunt. Soc. of Lond., Feb. 1, 1891.

EXHIBITION of a boy, aged four and a half years, from whose larynx many small papillary growths were removed by forceps, after tracheotomy. Dr. Dundas Grant, in operating on a similar case in a little girl, where neither cocaine nor chloroform could be borne, had succeeded with a week's rest and the cold Leiter's coil after each operation.

Hunter Mackenzie.

Brown, Price (Toronto).—*Laryngeal Fibroid Tumour.* Toronto Medical Society. "Canadian Practitioner," May 1, 1891.

THE patient, a farmer, aged forty-five, complained of great dyspnoea. On examination a fleshy growth was observed below the arytenoid cartilages, covering the whole of the right vocal cord and part of the left. The growth was treated by galvano-cautery with much benefit. The man was the subject of aneurism and died of rupture of the sac three months afterwards.

Post-mortem.—The growth was found to be eradicated, a large aneurism was seen on the aortic arch, formed just before the innominate artery is given off. The innominate artery was pressed to one side, and an artery which was observed during life to ascend up in front of the trachea proved to be the right common carotid. There was perforation of the sternum, due to pressure.

George W. Major.

Grant, J. Dundas (London).—*Epithelioma of the Larynx.* "Brit. Med. Journ.," Feb. 21, 1891. Hunterian Soc., Jan. 28, 1891.

EXHIBITION of a case treated by thyrotomy (Butlin's method).

Hunter Mackenzie.

Zander, Adolf Th. (Perm.).—*Traumatic Ulcerative Laryngitis.* "Khirurgicheskyy Vestnik," Dec. 1890, p. 752.

A MALE peasant, forty years old, applied to the writer about four months after his having accidentally swallowed a fish bone, which had been ex-

pectorated during a coughing attack two months later. From that time the patient had begun to suffer from excruciating pain about his larynx, while there had supervened ultimately an extreme difficulty in breathing. The laryngoscope revealed multiple ulcers scattered about the laryngeal inlet, and intense catarrhal inflammation and swelling of the true vocal cord. After a fleeting amelioration under some simple medical treatment, alarming attacks of suffocation set in, which necessitated tracheotomy. Five weeks later the patient was discharged in a satisfactory general state, but still wearing a canula, since any attempts at removing the latter were invariably followed by severe suffocative phenomena.

Valerius Idelson.

Wilson, Stacey.—*Recurrent Aphemia.* "Brit. Med. Journ.," March 14, 1891.
Midland Med. Soc., Feb. 18, 1891.

EXHIBITION of a man, aged fifty-one, who was suffering from a third attack of aphemia.

Hunter Mackenzie.

Onodi.—*Experimental Researches on the Paralysis of the Larynx.* "Revue de Laryngol.," Dec., 1890.

BESIDES superficial communications which the author has already found to exist between the superior laryngeal nerve and the branches of the recurrent which supply the transverse arytenoid, he has lately discovered communications between the nerves in the deeper regions of the transverse arytenoid muscle. Diphtheritic paralyses, which according to received opinion are caused by a progressive neuritis, ought more readily to be general from the multiple communications between the superior laryngeal and recurrent, both on the sensory and motor aspect of the larynx. The supposition accepted up to now ought to be discarded, that the neuritic process affects before all others the superior laryngeal, then the vagus trunk and the recurrent fibres.

Joal.

Townsend, E. (Cork).—*Aortic Aneurism.* "Brit. Med. Journ.," March 14, 1891. Cork Med. and Surg. Association, Feb. 11, 1891.

EXHIBITION of an aneurism involving the ascending and transverse portions of the arch of the aorta, which protruded through the sternum, and which pressed upon, and flattened, the recurrent laryngeal nerve.

Hunter Mackenzie.

Grant, J. Dundas (London).—*Tuberculosis of the Larynx.* "Brit. Med. Journ.," Feb. 21, 1891. Hunterian Soc., Jan. 28, 1891.

DEMONSTRATION of a case treated by intra-laryngeal injections of half-drachm doses of menthol. The appearances had been little altered, but the treatment had been productive of much comfort, and the power of swallowing had returned. Mr. Mark Hovell had reason to prefer lactic acid, in 30 to 80 per cent. solutions, to menthol.

Hunter Mackenzie.

Gomers, W. R. (London).—*The Convulsive Cough of Puberty.* "Brit. Med. Journ.," Jan. 10, 1891.

THE writer corrects the report of his remarks on the paper of Sir Andrew Clark (*vide infra*). He says:—"The observation referred to the alleged

"resemblance of the cough to the sound made in the laryngeal crises of
"tabes. I said that, while I would not deny that there were cases of
"laryngeal crises in which a similar sound was made, in all the cases of
"each disease that had come under my notice the sounds produced
"were quite different; that I had not understood the paper to assert
"that in no disease whatever was any similar sound ever produced, but
"merely that the cough differed so notably from all ordinary forms of
"cough that it might fairly be described as *sui generis*, and in this I
"entirely agreed. As a matter of fact, I have never even read a descrip-
"tion of the laryngeal crises of tabes which is suggestive of a similarity
"to the peculiar cough referred to."

Hunter Mackenzie.

Clark, Sir Andrew (London).—*Remarks on the Barking Cough of Puberty.*
"Brit. Med. Journ.," Dec. 20, 1890. Med. Soc. of Lond., Dec. 15, 1890.

THIS cough is not an ordinary nervous cough. It is not the ordinary cough of local irritation, of related pathological changes, of reflex action, of pneumogastric trouble, or of mere hysterical disorder. In all the cases but one observed by the author, the subjects, and also their parents and families, were "nervous."

The fit of coughing may be slight, or very severe. In one case, during the continuance of the paroxysm the patient was apparently much distressed. His face was swollen and faintly livid, the eyeballs became prominent and congested, the body was shaken by the violence of the coughing, and the hands crossed upon the chest convulsively clutched his clothes. At the close of the paroxysm the patient seemed a little dazed, and was somewhat giddy. He recovered in a few minutes, and passed a quantity of limpid urine.

The prognosis is favourable, for in all the cases observed by the author (over twenty in number) the course, although usually tedious and prolonged, has ended eventually in complete recovery.

The author does not believe that he has succeeded by any treatment employed by him in influencing the disorder to any great extent. He, however, recommends appropriate regimen, sedative applications to the interior of the throat, and some internal remedies. The local sedatives which he has found most successful are two:—glycerine of borax, with oxychloride of bismuth and morphine, and the same with the substitution of cocaine (10 per cent.) for morphine. These applications should be brushed over the whole of the throat after each meal, and also at bed-time.

The general remedies recommended are also two in number:—the one is a syrup of the bromide of quinine and iron, with small doses of arsenic, and the other is a pill of reduced iron, valerianate of zinc, belladonna and nuxvomica. The latter combination is often successful in controlling the cough. It ought to be given in doses slowly increased until the physiological effects of the belladonna become apparent, and then slightly diminished.

A sea voyage and moral influences may also tend to promote recovery.

In the discussion Dr. GOMERS classed these cases under three heads:

(1) In girls, associated with nervous symptoms of the hysterical type; (2) in boys, as a sort of "habit chorea"; and (3) where the cough always existed

alone, and was invariably associated with masturbation, on ceasing which it disappeared. A somewhat similar cough was sometimes met with in locomotor ataxy.

Dr. STEPHEN MACKENZIE had met with these cases rather earlier than at puberty. He thought it was closely allied to hysteria, and might be cured by a little judicious neglect or by moral treatment. He had found it more common in boys than in girls.

Dr. HAVILAND HALL mentioned an obstinate case in which, during one of the attacks of cough, spasm of the glottis supervened and necessitated tracheotomy.

Dr. MONEY remarked upon volitional weakness of the abductors, which he had noticed in one case, and suggested a possible etiological association with rickets and laryngismus stridulus.

Dr. SEMON said there were two varieties of the cough, the paroxysmal and the rhythmical. One prominent feature was that, although the cough was very harassing to the patient and his friends, and interfered markedly with sleep, it might continue for months without affecting the general health.

Dr. PERCY KIDD related a case in which the cough seemed to be due to enlarged tonsils.

Dr. LAUDER BRUNTON had observed these cases at all ages. He thought the pharynx had more to do with its production than the larynx. In some instances it seemed to be a gouty manifestation.

Sir ANDREW CLARK, in reply, insisted upon the distinctive character of the cough, and its connection with puberty. *Hunter Mackenzie.*

Zander, Adolf Th. (Perm.)—*Foreign Bodies in the Larynx and Trachea.* "Khürigitchesky Vestnik," Dec. 1890, p. 752.

THE writer relates two cases, one of which relates to a peasant woman of twenty-six, residing at a doctorless village about 120 miles from the author's (Zemsky) hospital, who had swallowed a flat quadrangular piece of bone of the size of a farthing-piece. The foreign body causing difficulty in breathing and pain on swallowing, she at once started (on some rustic vehicle) to the town, to arrive at the latter on the fourth day. On auscultation there were heard *râles* and whistling sounds all over the lungs. On laryngoscopic examination the bone was found to be jammed just below the right true vocal cord, nearly occluding the whole rima glottidis. All attempts at extracting the foreign body through the mouth having utterly failed, laryngo-fissure (without division of the upper portion of the thyroid cartilage) was at once performed, and the bone removed. Except a moderate fever (39° C.) for the first few days, the after-course ran quite smoothly. On the twenty-seventh day she left home with her wound healed, clear voice, etc.

The other case is that of a peasant man of thirty-seven, living at a village about 100 miles from the hospital, who had been subject to tracheotomy (for what complaint is not known) about nine years previously, having been carrying a hard caoutchouc canula ever since. On March 29th the latter broke into two pieces, the inner fragment remaining in the trachea. On his arrival at the town on April 1st, the fistula (which

had been considerably contracted) was at once enlarged, and the foreign body extracted. On the next day he left homewards, having been supplied with a metallic tracheal tube.

Valerius Idelson.

Sprengel (Dresden).—*Diagnosis of Foreign Bodies in the Bronchi.* "Centralbl. für Chirurgie," 1891, No. 14.

A THIN glass capsule was inspired by a child five years old, and was found seated in the right bronchus. Tracheotomy was performed, and forceps were introduced, by which the trachea near the bronchus was a little dilated, but the foreign body itself was not touched because of the danger of breaking it in pieces. The foreign body then was coughed out, and the patient cured in four weeks. It was of interest that in both bronchi bronchial respiration was remarked. Usually when a bronchus is closed by a foreign body no respiratory noise is heard at all. It must be explained by the fact of the glass pearl being situated so that air could pass through its opening. The entrance of the left bronchus was also compressed a little ; therefore, here also the respiration was bronchial.

Michael.

Caceres, Nino.—*Leech in the Air Passages.*

THIS report is of a case where a child of thirteen swallowed a leech when drinking water, and for some days coughed up a good deal of blood. After several attempts to extract the leech, which was in the interior of the larynx, he managed to remove the animal by depressing the tongue with the left index finger and introducing Fauvel's forceps into the laryngeal cavity.

Botey.

Spencer, W. G. (London).—*Lympho-Sarcoma in Dog surrounding Trachea and Bronchi.* "Brit. Med. Journ.," Jan. 10, 1891. Path. Soc. of Lond., Jan. 6, 1891.

CARD specimen.

Hunter Mackenzie.

Churton (Leeds).—*Sarcoma of Lungs and Bronchial Glands causing Stenosis of Oesophagus.* "Brit. Med. Journ.," Mar. 21, 1891. Leeds Med. Chir. Soc., Mar. 6, 1891.

EXHIBITION of specimen.

Hunter Mackenzie.

THYROID GLAND, NECK, &c.

Hall, F. de H. (London).—*Bronchocoele.* "Brit. Med. Journ.," Feb. 21, 1891. Med. Soc. of Lond., Feb. 21, 1891.

EXHIBITION of a case of thirty years' duration. *Hunter Mackenzie.*

Spencer, W. G. (London).—*Exophthalmic Goitre, causing Death by Asphyxia.* "Brit. Med. Journ.," March 7, 1891. Path. Soc. of Lond., March 7, 1891.

EXHIBITION of specimen taken from a girl, aged twenty, consisting of a

large bronchocele, to which, at the lower border, was a persistent thymus gland. The bronchocele had been produced by uniform enlargement of the lateral lobes and of the isthmus, and surrounded the trachea so as to meet behind it. The tumour had the structure of a cystic colloid hypertrophy of the thyroid gland. A persistent thymus, larger than the head of the pancreas, was attached to the tumour.

Shortly before death asphyxia became imminent, and the trachea was opened through the upper part of the tumour. The hæmorrhage was considerable. No relief was afforded by the opening of the trachea, and the insertion of an ordinary tracheotomy tube, but air entered freely through a vulcanite tube passed four inches down the trachea. The same evening the patient died of asphyxia, caused by accumulation of mucus below the tube, and which could not be expectorated. The rarity of such a termination of a case of exophthalmic goitre was remarked on by the author.

Hunter Mackenzie.

Pitts, Bernard (London).—*Substernal Goitre arising in Accessory Thyroid.* "Brit. Med. Journ.," Dec. 20, 1890. Path. Soc. of Lond., Dec. 16, 1890.

EXHIBITION of specimen removed from a man aged fifty-four. A small round swelling appeared just visible in the median line of the neck, immediately above the sternal notch, and evidently extending behind the sternum. The tumour was removed by a median incision, and shelled out without much difficulty. Microscopically it showed ordinary thyroid structure. The trachea was very markedly flattened, from before backward, in a manner quite unusual from ordinary goitre pressure. Mr. Berry thought the tumour was a cystic adenoma of the thyroid. An accessory thyroid body was extremely rare. Another explanation of these tumours was that they became detached from the thyroid body, and then wandered away. Mr. Pitts, in reply, stated that accessory thyroid bodies could be found in about one in twelve bodies.

Hunter Mackenzie.

Hookman, G. H. (East Sheen).—*On Sudden Dyspnœa associated with Thyroidal Tumours.* "Brit. Med. Journ.," Dec. 13, 1890.

THE author doubts the efficacy of intubation as a means of relieving this form of dyspnœa. He narrates the case of a girl, aged eighteen years, in whom the successful passage of a tube, after thyrotomy, failed to influence the thyroidal dyspnœa from which she suffered. He believes that the sudden onset of the dyspnœa in such cases, and the failure to relieve them by the successful introduction of a tube, point to a nervous cause allied to the condition at work in the production of spasmodic asthma, and he recommends the inhalation of chloroform or nitrite of amyl, as being likely to reach and affect the smaller bronchial tubes.

Hunter Mackenzie.

Auerbach, Seil H. (Rovno).—*Osmic Acid in Goitre.* "Meditsinskoïe Obozrenië," 1891, No. 3, p. 307.

THE writer describes the case of a female patient whom he treated by parenchymatous injections of osmic acid, local massage (fifteen minutes'

séances once daily), and internal administration of iodide of potassium. The acid was employed in the shape of an aqueous solution (one grain of crystallized acid to two drachms of water), a syringeful of which was injected once daily, or every other day, for three weeks. By the end of the period the tumour decreased one-half, while all subjective symptoms disappeared. The author believes that the method should be preferred to excision, since it is free from such dangers as the development of cachexia strumipriva, etc.

Valerius Idelson.

Roberts, Sidney (Brighton).—*Cystic Bronchocele*. "Brit. Med. Journ.," Feb. 28, 1891. Sheffield Med. Chir. Soc., Feb. 12, 1891.

EXHIBITION of a woman, aged sixty-seven, with multiple cystic bronchocele of forty-seven years' duration. For the last eleven years the patient had been subject to attacks of sudden dyspnœa; otherwise the tumour caused no pressure symptoms, and very little discomfort.

Hunter Mackenzie.

Spirig (St. Gallen).—*Strumitis following Typhoid*. "Correspl. Schweizer Aerzte," 1891, No. 3.

A PATIENT, twenty-two years old, in the fifth week of an abdominal typhoid developed a red, hot, sensible spot in the thyroid, showing fluctuation some time later. Incision was followed by discharge of pus. Cure. In the pus typhoid bacilli were found.

Michael.

Perry, E. (London).—*Tuberculosis of Thyroid Gland*. "Brit. Med. Journ.," Feb. 7, 1891. Path. Soc. of Lond., Feb. 3, 1891.

CARD specimen.

Hunter Mackenzie.

Murray, George (Newcastle-on-Tyne).—*Myxœdema*. "Brit. Med. Journ.," March 14, 1891. Northumberland Med. Soc., Feb. 12, 1891.

EXHIBITION of a woman, aged forty-six, in whom it was determined to try the effect of injection of extract or juice of the thyroid.

Hunter Mackenzie.

Buzdygan.—*Myxœdema*. "Przegląd Lekarski," 1891, Nos. 4, 5, 6.

THE author reports two very minutely observed cases of this disorder, to which the English physician, Ord, first gave the name "myxœdema," Charcot "cachectie pachydermique," and which is identical with Kocher's "cachexia strumipriva." The first case was that of a female, aged thirty-four; the other, a tailor, fifty years old. Both cases exhibited entirely those characteristic symptoms described by Ord, namely:—

1. Characteristic œdema of the skin of the face, as well as of both extremities, thickness of the mucous membrane in the oral cavity, considerable enlargement of the tongue.

2. Changes in the thyroid gland; in one case fibrous degeneration, in the other atrophy.

3. The affection of the nervous system was reduced in both cases only to diminution of the memory and depression of intelligence.

4. Lymphatic glands enlarged.

5. Voice changed, depending on hypertrophy of the mucous membrane of the larynx. This latter may also cause dyspnoea.

6. The changes in the blood are not distinct, no leucocytosis being present, as some authors have reported.

7. Paræsthesiæ in separate spots on the skin, itching, burning, as well as conjunctivitis catarrhalis, caused, according to Landau and Ewald, by irritation of the sympathetic nerve.

8. Both cases prove that after the process of digestion, mucin appears. In one case mucin also was found in the urine.

9. Temperature always subnormal (36.1° C.).

10. A certain connection between the changes in the genital apparatus in females and myxœdema can be accepted. In one of the author's cases menstruation had already ceased in the twenty-eighth year, four years before the appearance of the disease, and examination showed atrophy of the uterus.

11. As to the relation between the two sexes, ten females to one man is the generally accepted ratio.

12. Myxœdema mostly occurs in adults (over thirty years).

13. The treatment in both of the author's cases, as in general, was without effect. Death always follows with the symptoms of collapse or uræmia.

J. Sedziak.

Thornton, Bertram (Margate).—*Two Fatal Gland Cases.* "Brit. Med. Journ.," Jan. 31, 1891.

IN the first case—that of a girl, aged eight years, who had some enlarged cervical glands, and who, a week before death, commenced to cough up some foul-smelling pus—it was found that, in immediate posterior relation to the lower end of the trachea there was an abscess cavity, with two or three small degenerated glands matted together, and discharging into the abscess sac at its upper end, and between the lower end of the abscess and the trachea there existed a ragged opening. In the second case—a boy, aged eleven years, with greatly enlarged cervical glands—sudden fatal choking ensued, apparently from the sudden bursting of a glandular abscess into the trachea, "the pouring out of the matter into the wind-pipe causing spasm of the glottis." The author advises early operation in all such cases of enlarged glands, when there is evidence of direct or indirect interference with respiration.

Hunter Mackenzie.

Wróblewski.—A Report for the year 1890 of the Ambulatorium for patients with diseases of the Nose, Throat and Larynx, in the Evangelic Hospital in Warsaw. "Kronika Lekarski," 1891, Nos. 3, 4.

THIS is the author's first report. The total number of patients, 650; visits, 1808. The author, besides statistical figures, reports shortly some more or less important observations (sarcoma retronasi, laryngitis phlegmonosa, etc.), and adds some general remarks, as for instance, concerning the operation of post-nasal growths, which he always performs in semi-narcosis.

J. Sedziak.

REVIEWS.

The Medical Annual and Practitioner's Index. Ninth year. 1891. Bristol : John Wright & Co.

THIS annual publication is now well established as an exceedingly valuable medical work. In a compact and readable form, "nearly 3000 references to diseases and remedies" are presented to the practitioner. A very careful selection seems to have been made by the editor—Dr. Percy Wilde—and his collaborators, and an excellent general index is appended. It would be difficult to point to any work so valuable, at the same time so comprehensive and cheap in price.

There is a very excellent article by Dundas Grant upon Diseases of the Ear, and several good reviews of Diseases of the Nose and Throat by Greville Macdonald and Watson Williams, and Lennox Browne has a lengthy note upon "Tenesmus" and Varix of the Throat, or what he somewhat inharmoniously calls "Throat Piles." He is a little hard upon his contemporaries in the remark that "during the last three or four years" several quasi-original communications upon lymphoid hypertrophy and "varix of the base of the tongue have appeared from the pens of "American and English contributors," and we rather infer from his remarks that he claims the credit of being the first to direct attention to hypertrophies of the lingual tonsil, etc. Published at the beginning of the Koch fever, it is only to be expected that the treatment of laryngeal tuberculosis by Kochine should be favourably regarded. We now know enough of the method to condemn it without reserve. We have not space to notice the various paragraphs and sections relating to our specialty in detail, but we may remark upon a certain degree of carelessness in the revision of authors' names, especially foreign. We repeat that there is not any similar work existent which is so generally useful to the practitioner, and which can be obtained at such small cost. These 600 pages contain a really marvellous amount of general information.

Norris Wolfenden.

Hirsch.—*Die Diphtherie und ihre erfolgreiche Behandlung auf Grund vieljähriger Erfahrungen.* ("Diphtheria and its Treatment proved by long experience.") Leipzig. 36 pages.

RECOMMENDATION of local treatment—acetic acid, combined with the internal use of quinine and chlorate of potash.

Michael.

NEW PREPARATIONS.

Liquor Carnis Preparations (Caffyn).

WE have previously had occasion to speak in commendation of these productions, and we have now to notice two preparations which have been forwarded to us by the manufacturers.

CAFFYN'S MALTO-CARNIS & COCOA.—This contains two-thirds or sixty-six per cent. of Caffyn's Liquor Carnis, in combination with Extract of Malt and Cocoa, and a dessert-spoonful may be added to milk and sweetened to taste in a breakfast cup. The problem of combining a diffusible stimulant with easily assimilated animal food seems to have been met, and the preparation should be very valuable for weak digestions, cases of nervous depression, etc., and also to travellers, who will thus have at hand, in concentrated form, a very strong and highly nutritive food stuff. Our experiments with this preparation lead us to conclude that it is all that the manufacturers claim for it, and that it is a most valuable preparation of novel character.

CAFFYN'S LIQUOR CARNIS.—This is of undoubted excellence, and we have on a previous occasion reported most favourably of its value in the sick room. Further experience has confirmed us in this expressed opinion, and we believe it to be undoubtedly one of the purest, most trustworthy and satisfactory preparations in the market.

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EMIL BEHNKE ON THE NATURE AND
TREATMENT OF STAMMERING.

THE views of Mr. Emil Behnke, the well-known vocal physiologist, were laid before a medical gathering at the Central London Throat and Ear Hospital on the morning following the recent meeting of the British Laryngological and Rhinological Association.

The lecturer considered the distinction between stammering and stuttering as practically valueless. The term "stammer" indicates imitatively that form of impediment in which the sufferer, on endeavouring to utter sound, is able only to open the mouth and emit frequent spasmodic, but voiceless expiratory gasps, stammering or stuttering for vowels. In "stuttering," as hitherto understood, the consonants are chiefly involved, and the initial consonant of even the simplest word may be repeated by the patient with astonishing rapidity before the vowel following can be emitted. Mr. Behnke therefore sets aside this refinement of onomatopœia and asks us, we think judiciously, to employ the term "stammer" for both, thus simplifying the matter at the outset, as the conditions are often coincidental and their differences quite non-essential.

The nervous centres co-ordinating the several mechanisms of respiration, phonation and articulation are rightly considered chargeable for the disturbances occasioning the defect under consideration, but we question whether physiologists generally will be satisfied with the location of this disturbance in the medulla. We should feel disposed to place it in the cerebral cortex if called on to locate it anywhere in particular, and this view would give much greater support to the author's

opinion as to the possibility of "training" the affected nervous centre. He rejects the possibility, or at least the probability, of children "growing out of" the habit of stammering, and insists strongly on the avoidance of ridicule, mimicry, undue severity or teasing, as likely to make the nervous little stammerer still more nervous in his stammering.

Touching on the "pathological aspect," the lecturer had observed that in some instances where his methods of training had been unexpectedly unsuccessful, reference of the sufferers to a surgeon led to the detection of local or general morbid conditions, the removal of which enabled him to pursue his usual course with his wonted success. Thus, lateral spinal curvature, post-nasal adenoids, and onanism were in certain cases found to be the circumstances preventing recovery, and in all probability nasal polypus, decayed teeth, intestinal worms, and phimosis have a similar prejudicial effect. This appreciation of the necessity for medical co-operation in the treatment of stammering shows a scientific spirit with which many who pose as curers of the defect cannot be credited.

The "mental aspect" of stammering is interesting both as cause and effect. Thus the sufferer may stammer before strangers, or when occupied only with his attempts at utterance; whereas, among intimate friends, or when engaged in some favourite game, he may be quite free from his impediment. Hence the importance of acquiring the confidence and goodwill of the pupil, and of exercising the greatest patience and tact in training him. To divert the patient's mind from his difficulty, as by causing him to accompany each troublesome syllable by some slight movement of the finger, the hand, or the foot, etc., has formed the stock-in-trade of many so-called stammer-curers, and was recommended by the late Charles Kingsley.

Under the heading "Elocutionary Aspect," some of the most salient points in the lecturer's "system" were brought out. He divides his cases "into two classes, viz., those in which the difficulty can be traced to the "management of the bellows, and those in which it cannot." He tests any given patient by placing him on a couch, flat on his back, comfortably raising his head on a pillow, and then putting him through some "diaphragmatic drill." If after a little practice the patient can then repeat the alphabet, he places the case in his first group and prognosticates a successful result; otherwise he is less hopeful. Fortunately, he finds the former class to be in the majority, and describes cases in which the results have quite borne out his contentions. It may be as well to explain that what the lecturer means by "diaphragm drill" is a methodized and graduated series of inspirations and utterances of sounds produced by means of the diaphragm and (though not mentioned) the muscles of the abdominal walls, while the hand of the trainer, or of the pupil, is placed on the epigastrium to make the moment more obvious. "Phonation drill," for the ab- and adductors of the vocal cords, consists in directing the stammerer to sing a number of staccato tones, each preceded by a short inspiration. Similarly the soft palate has to be put through its facings by means of appropriate exercises, and here Mr. Behnke wisely emphasizes the necessity for medical interference in case of palatal defects. In the class of cases in which the stammering does not depend on

impaired respiration (the minority), he attributes much of the trouble to an involuntary exaggeration of "all the stops and checks taking place in "the vocal apparatus from the glottis to the lips, which are involved in "speech. The more he exaggerates these stops and checks, the greater "will be his difficulty to overcome their resistance, and he must be "trained therefore to make these closures *as shortly and as lightly as "possible.*" This appears to be much facilitated by the interposition of a short aspirate after the consonant ; thus, G-h-eorge instead of George, or, as the patient would say, G-g-g-george, P-h-a instead of Pa, and so forth. Stammerers can generally sing and whisper without difficulty, because, in both cases, there is a stationary condition of the rima glottidis as regards width, in the former for a continuous flow of vocal tone, in the latter from its continuous abstention from tone production. It was, therefore, advised that the stammerer should "*exaggerate his vowels at the expense of his consonants,*" and that the attack of a vowel should, in case of difficulty, be "*preceded by a short inspiration.*" Another feature with regard to stammerers is that when they have once started themselves, they have no difficulty in any subsequent words uttered uninterruptedly in the same breath. Mr. Behnke recommended that the stammerer should, therefore, " *dwell on an easy syllable, pro- "longing the vowel of it, and then tack on the remainder of the phrase, as "though it were one word, and without any interruption whatever,*" or if there be no easy syllable to start with, he must make it easy by preceding it with a little indefinite vowel sound. How often is this little dodge practised by the mental stammerer when he interpolates "Haw !" "Don't you know !" or "Hem !" in order to give his vacant intellect time to pull itself together. This reminds us of the large mental element in stammering, and while giving every importance to the respiratory factor on which the lecturer lays such stress, and founded on which his practice is unquestionably most successful, we cannot resist asking ourselves whether the success is not largely due to the diversion of attention which is effected by the "diaphragm drill." An exercise, consisting in speaking slowly and distinctly, *with teeth overlapping and held quite firmly together*, was said to produce excellent results on the ordinary speech after about ten minutes' practice. The lecture concluded with a few special remedies for a few special difficulties, such as the substitution of the vowel "oo" for the consonant "w," e.g., "oo-ater" for "water," and similarly of the vowel "ee" for the consonant "y" as written and as understood before long initial "u," e.g., "ee-onder" for "yonder," "ee-ooniverse" for "universe."

The time necessary for cure depends, of course, upon the severity of the case, and the intelligence and aptitude of the patient. We should attach very considerable importance to the state of the patient's health, as, in addition to the morbid conditions already referred to, the existence of a more or less limited degree of chorea, or other nervous malady, might seriously affect the prognosis, and render the treatment by diaphragm drill abortive—remembering at the same time that the "drill" treatment of chorea is of considerable value.

On the whole, we have the greatest sympathy with Mr. Behnke in his

conscientious endeavour to analyze the nature of stammering, and to methodize its treatment in such a broad-minded way, and we feel sure that the profession will welcome an *exposé* of his *modus operandi*, even if they see something more than mere respiratory exercises in the diaphragm and phonation drill which has given in his hands such unquestionably good results.

ANNOTATIONS.

Dr. N. Senn on Koch's Lymph.

"AWAY with Koch's lymph!" is the somewhat sensational heading of an article by the distinguished American surgeon, Dr. N. Senn, in a recent number of the "Medical News." "I have given Koch's lymph a fair trial," says he, "and have carefully observed its effects, and I have become firmly convinced both of the danger attending its use and its utter inutility in curing any form of tuberculosis." His paper is written for the special purpose of placing himself on record as one who protests earnestly against further experimentation with "this mysterious and dangerous fluid." Dr. Senn delivers himself of a trenchant criticism of the method, and amongst other remarks records his opinion that, "if future research should lead to the discovery of a specific remedy for the cure of tuberculosis, it will be a microbe antagonistic to the bacillus of tuberculosis, or a substance which, when brought into contact with a tuberculous focus, will have an effect on the tissues opposite to that of Koch's lymph," an opinion he founds upon the now well-known pathological facts first pointed out by Virchow—who never in the course of his long and honourable experience did anything more serviceable than when he uttered those pathological notes of warning which checked excited, unreasoning Koch-fetishism—that the effects of tuberculin on granulation tissue is to break down the barrier surrounding the infected area, and to liberate the bacilli and spores, and lead to general dissemination of the process.

The lymph is of little or no value as a means of diagnosis, a single injection of tuberculin is not devoid of danger, many cases of tuberculosis reported as cured by the treatment have since relapsed. Some have died, and it is very probable that some of the reported cures have rested on a faulty diagnosis. "While the tuberculin treatment of pulmonary tuberculosis can show no better results, it is difficult to ignore the fact that it has been productive of more harm than almost any other plan of treatment heretofore suggested, and on this score alone the verdict, 'Away with Koch's lymph!' is timely and imperative!" Side by side with this severe condemnation, which will receive endorsement from many quarters, we may note the fact of a bill having been introduced into the Prussian Legislature to endow the Koch Institute with a large sum of money, a grant which Virchow, to his credit, opposed.

The Functions of the Tonsils.

THE uncertainty which prevails as to the nature and functions of the faucial tonsils, has induced Dr. Hodenpyl¹ to make a special study of these much bewritten and misunderstood organs. Following the view adopted by most capable anatomists, and vigorously advanced by Mr. Mayo Collier at a recent meeting of the British Laryngological Association, he regards the tonsils as a part of the lymphatic apparatus, and as closely resembling in structure a Peyer's patch ; indeed, except for the crypts, the structure of the faucial tonsils is identical with these patches, and with the intestinal lymph nodules.

"Studies in pathology indicate that the lymph nodes act as filters. Thus particles of pigment, bacteria and cells from neoplasms, which have gained access to the lymph channels, are apt to be caught and held in the lymph nodes."

A certain amount of absorption is carried on by the lymph nodules of the intestines, as demonstrated by Schaefer in the case of Peyer's patches with fats. The theory that the tonsils are in any way concerned in secretion of mucus is abundantly discredited on anatomical grounds. The theories which would make of the tonsils apparatus for the re-absorption of waste products of the oral and pharyngeal secretions, and of the digestive ferments of saliva, are quite unsupported by facts. Dr. Hodenpyl made numerous experiments upon dogs and rabbits with the object of testing this supposed power of absorption, using for this purpose various materials, such as fats, carmine, Berlin blue, emery powder, aniline colours, and pigments, which could afterwards be recognised in the tissues. All sources of possible error being, so far as could be, eradicated, the experimenter found that soluble or insoluble materials are only to a very slight extent absorbed by the oral, pharyngeal or tonsillar mucous membrane. It is the epithelium which prevents this absorption since substances like atropine, injected into the tonsillar tissue below the epithelium, may be rapidly taken up by the lymphatics and be carried into the general circulation. The same applies to the mucous membrane in the neighbourhood of the tonsils. The tonsils have no power either of throwing off from their surface soluble and insoluble materials contained in their substance. These either remain in the tissues, or are carried off by the lymphatics to other regions. Rarefaction, or in other words, extreme thinning, of the tonsillar epithelium at certain spots is common. Where the epithelium is denuded, infection, *e.g.*, diphtheria, can enter and contaminate the general system. If diphtheria may enter thus, why may not other infections invade the system *via* the denuded surface of the tonsils? The mere integrity of the epithelial covering seems, therefore, to act as a protection against invasion from without, without the necessity of inventing fanciful phagocytes or bacillus-devouring cells in the tonsillar

¹ "The Anatomy and Physiology of the Faucial Tonsils," by Eugene Hodenpyl, M.D. "The American Journal of the Medical Sciences," Vol. CL, No. 3, 1891.

structures. There really seems no valid reason to surround the tonsils with any mystery of physiological function. They are merely ordinary lymphatic structures capable of absorbing passively only when their epithelial covering is broken just as any other mucous membrane. As to any selective action in the absorption of any particular fluids or ferments, there is certainly no evidence ; as to their possessing any secretive properties, there is every possible reason to deny any such function.

THERAPEUTICS, DIPHTHERIA, &c.

Astringent Gargles.—"The Times and Register," May 30, 1891.

THE following formula is given for the gargle known as "Goddard's astringent gargle," copied from the "American Journal of Pharmacy" :—

Fol. rosæ rub.	...	...	...	ʒii.
Aquæ bullientis	...	...	...	ʒv.
Acidi sulphurici dil.	...	...	...	ʒss.

Infuse, when cold strain, and add—

Mel despumati	...	...	...	ʒi.
Acidi tannici	...	...	...	ʒii.
Aluminis	...	...	...	ʒii.
Spir. vini rectificati	}	...	...	āā ʒvi. Mix.
Aquæ rosæ				

Another gargle is as follows :—

Red rose petals	...	...	...	ʒii.
Pomegranate rind	...	...	...	ʒiv.
Boiling water	...	...	...	ʒvi.

Infuse, strain, and add—

Alum	...	...	...	ʒii.
Clarified honey	...	...	...	ʒi. Mix. Filter.

R. Norris Wolfenden.

Phillips.—*The Local Therapeutics of Diseases of the Nose and Throat.* "Med. Rec.," April 11, 1891.

WENDELL PHILLIPS is decidedly in favour of conservative surgical procedures in a large proportion of the cases of chronic catarrh. The influence of drugs properly applied is of great value in the management of these cases. Aqueous solutions, especially sprays, are used far less than formerly, because their place has been filled by better remedies. The most important exception to this rule is the peroxide of hydrogen, which, in addition to other qualities, is especially useful in the softening and removal of inspissated crusts, and for cleansing open sores and cut surfaces. Great good will result in all operative cases from careful after-

treatment, and here is where the peroxide of hydrogen is of inestimable value. The various products of petroleum that can now be obtained in liquid form have taken the place of the aqueous solutions formerly so much used. They are palatable, non-irritating, and capable of carrying many needed remedies in solution. They are soothing to mucous surfaces, may be used warm or cold, and never clog the spray-tube. They may be made antiseptic to some degree by the addition of gum benzoin. On account of their oily properties they remain on the surface of the membrane for some time, during which they not only protect the membrane from atmospheric influences, but give to it whatever remedy they may contain. Menthol, eucalyptol, oil of eucalyptus, cocaine, terebene, thymol, carbolic acid, camphor, iodine, oil of gaultheria, tar, iodoform and aristol may be dissolved in liquid petroleum and used as sprays. Menthol should not be used in a proportion to exceed twenty grains to the ounce, and ordinarily ten grains to the ounce will suffice. Eucalyptol is preferable to the oil of eucalyptus; it is less irritating, pleasanter to the taste, and can be used in smaller quantities. It should never be used stronger than half a drachm to the ounce, and the oil of eucalyptus not stronger than a drachm to the ounce. Terebene may be used in the proportion of twenty grains to the ounce. Carbolic acid and iodine, of each one grain to the ounce, is sufficient for cases requiring these drugs, and thymol may be used ten to twenty grains to the ounce. A solution of aristol, thirty grains to the ounce of benzoin, is of service in atrophic rhinitis with ozæna and in specific rhinitis. The aluminium aceto-tartrate in a twelve per cent. solution is of value in chronic hypertrophic rhinitis and to arrest hæmorrhage after operations.

R. Norris Wolfenden.

Williams, C. Theodore (London).—*Remarks on the Treatment of the Pyrexia of Phthisis.* "Brit. Med. Journ," March 28, 1891.

THE author's conclusions are as follows :—(1) The pyrexia due to tuberculization is best dealt with by derivative measures, such as counter-irritation, salines promoting secretion from other organs, and assisting expectoration. (2) That in the treatment of the pyrexia accompanying softening and excavation, measures which hasten these processes are found to be most successful, especially if combined with anti-periodics, such as quinine, salicin, salicylate of soda, to moderate the fever. (3) That the use of medicines solely directed to lowering the temperature of the body without promoting increase in the natural secretions is generally inadvisable. (4) That our object in the treatment of phthisical pyrexia should be, not the reduction at all hazards of the temperature, but its lowering to the limits compatible with the comfort and well-being of the patients, and for this end that much may be done, in addition to the discriminating use of medicines, by the simple means of frequent food, combined with stimulants and rest in bed.

Hunter Mackenzie.

Editors of the "Lancet."—*Inhalations in the Treatment of Phthisis.*

"Lancet," May 23, 1891.

PROFESSOR GERMAIN SÉE'S method of treating phthisis is thus described: "The patient is shut up in a metal chamber hermetically

"closed, and compressed air, passed through creasote and eucalyptol, is made to enter slowly. The air in passing through these liquids is saturated, and arrives charged with a large quantity of these medicaments. The pressure must be slowly increased, and should not exceed a half-atmosphere. The speed of delivery of the air saturated with the medicated vapours is from fifteen to twenty cubic metres per hour for a space of five cubic metres of capacity. The length of time the patient remains in the chamber is usually two hours, sometimes three or more, and no inconvenience ensues as the result of this procedure. The inhalations are made daily or more frequently." Twelve cases were treated in this fashion (ten of tubercular phthisis in the softening stage, one of apical bronchitis, and one of foetid bronchitis), and in all there appears to have been considerable improvement, especially as regards expectoration and general condition. It is suggested that this plan may prove useful in face of the accepted futility of the methods of treatment by inhalations hitherto employed. [No mention is made of clinical evidence of the presence or absence of bactericidal effect, but Guttman is quoted as having found, in 1889, that the saturation of the system with creasote arrested the development of the bacilli. The value of guaiacol—one of the chief constituents of creasote—has been already pointed out in several of our recent abstracts.]

Dundas Grant.

Ransome, Arthur (Manchester).—*On Certain Conditions that Modify the Virulence of the Bacillus of Tubercle.* "Brit. Med. Journ.," April 11, 1891.

THE result of an experimental enquiry. The author believes that his experiments are too few in number to justify the statement of positive conclusions, but, so far as they go, they tend to prove that fresh air and light, and a dry sandy soil, have a distinct influence in arresting the virulence of the bacillus of tubercle; that darkness somewhat interferes with this disinfectant action, but that the mere exposure to light in otherwise bad sanitary conditions does not destroy the virus. There are also some indications that the presence of a cotton-wool envelope may somewhat interfere with the action of both good and bad air respectively.

Hunter Mackenzie.

Bogroff, K.—*On the Use of Fuchsin in Diseases of the Pharynx and Larynx.* Meeting of the Medical Society of Odessa. "Vratch," 1891, No. 16.

ON account of the capacity of aniline colours to permeate by imbibition the superficial layers of tissues, the author began in 1888 to use solutions of antiseptic fluids in combination with fuchsin. In one case of mycosis pharyngis, where different antiseptics were of no use, a solution of sublimate (1:1000) with fuchsin brought about a quick cure. Good results were noticed by the author in cases of difficulty in swallowing in phthisical patients if these difficulties arise in consequence of irritation in the larynx, produced by the secretion of the lungs, which secretion is sometimes in abundance, covering the mucous membrane of the larynx. In these cases the injected aniline colours permeating the superficial layers protects the mucous membrane from irritation, and produces a quick improvement in the state of the inflamed membrane, and con-

sequently lessens or totally removes the difficulty in swallowing. The conclusions to which the writer came are as follows :—(1) It is useful to inject fuchsin into the larynx with a prophylactic view in those cases of phthisis where the laryngoscopic examination shows any appearance of irritation in the larynx. (2) In using antiseptics in order to act on the bacilli, it is advisable to add one of the innocuous aniline colours. (3) The addition of colour is useful, in that it enables the physician to judge of the quantity of medicament that has reached the larynx, and also if it has reached the proper place.

E. Draispul.

Jonquière (Bern).—*Local Treatment of Laryngeal Tuberculosis.* "Correspl. für Schweizer Aerzte," 1890, No. 9.

MERELY a review.

Michael.

Downie, J. Walker (Glasgow).—*Intra-Laryngeal Injections in the Treatment of certain Laryngeal and Pulmonary Affections.* "Brit. Med. Journ.," April 18, 1891.

THE author has found the most efficacious and most pleasant form of injection to be twelve to twenty per cent. of menthol, with two to four per cent. of guaiacol, in olive or vaseline oil. Two drachms of this may be used at one sitting. He records several cases of pulmonary and laryngeal phthisis which have apparently been benefited by this treatment.

Hunter Mackenzie.

Von Klein.—*Morphine by Insufflation.* "New York Med. Rec.," May 30, 1891.

BETTER, speedier and longer effect said to be obtained by insufflation of morphine into the nostrils than by hypodermic injection of the same quantity. [The intra-nasal application of drugs in lower animals has been found a peculiarly delicate method of therapeutic investigation.]

Dundas Grant.

Muralt.—*Intubation.* Gesellschaft der Aerzte in Zurich, Meeting, Jan. 31, 1891.

THE author reviews the question of intubation, and concludes that it is a useful operation.

KRONLEIN believes that tracheotomy is generally better than intubation.

Michael.

Massei.—*Intubation of the Larynx.* Société Française d'Otologie et Laryngologie.

M. MASSEI points out the use which Lefferts has made of intubation in syphilitic cicatrization, and the cures obtained.

The author has tried this twelve times—five syphilitic, three tubercular, two after tracheotomy, one papilloma, and once in a case of pachydermia. He thinks intubation is indicated in very different pathological conditions. Stenosis, acute and chronic, may be got to yield, and in a surprisingly short space of time.

Joal.

Suarez.—*Laryngeal Forceps.* Société Française d'Otologie et Laryngologie, March, 1891.

THE new forceps have an opening at the extremity permitting the tumour to be seen when it is seized.

Joal.

Goodwillie.—*The Electric Cautery in Surgery, with Special Reference to its Use in the Nose, Throat, and Mouth.* Medical Society, State of New York.
 "New York Med. Journ.," Feb. 7, 1891.

OF all the therapeutic means for the removal of hypertrophies and abnormal growths of any part of the body, but especially those of the nose, throat, and mouth, electric cautery was of the most special value, and would produce results that could not be so well attained by any other method of treatment. It was eminently superior to any caustic or cauterizing agents used in surgery, it could be limited in its action and quickly applied, and was entirely under the control of the operator. For its successful use as a means of treatment it was not necessary to have a profound or technical knowledge of electricity. The electrical energy was now readily supplied with simple means of controlling the electromotive force to any particular case in hand. The troublesome and vexatious primary batteries would soon be among the things of the past, and in their place the electrical power would be supplied in storage cells or used directly from the dynamo, the current being controlled at the will of the operator. Dr. Goodwillie exhibited a complete electro-surgical apparatus which he had made for special employment in surgical cases in any part of the body, and described the electrical apparatus which he had arranged, which consisted of a Piffard's combined dynamo and motor wound to take a 120-volt constant current with a speed of 2200 revolutions, which could be regulated by the candle power of the lamp. Attached to the motor was a shaft with a hand-piece for carrying the instruments. The cautery was controlled with a rheostat, so that the smallest point electrode or platinum wire six inches in length might be used. He also explained in detail the various instruments which formed a part of the outfit and their adaptability to the special requirements of electro-cautery.

R. Norris Wolfenden.

Hildebrandt (Aschaffenburg).—*On Diphtheria.* "Münchener Med. Woch.," 1891, Nos. 18, 19, 20.

REVIEW of the subject.

Michael.

Hebold (Soran).—*House Epidemics of Diphtheria.* "Deutsche Med. Woch.," 1891, No. 19.

DESCRIPTION of some cases.

Michael.

Munn, W. P.—*Diphtheria; its Cause and Treatment.* "Med. News," March 7, 1891.

THE author remarks that "there are only a few conditions liable to be confounded with diphtheria by competent observers," and later goes on to say that an actual mistake in discriminating between "ulcerative follicular tonsillitis" and diphtheria is of rare occurrence; "but a great many practitioners, especially those of the homœopathic persuasion, prefer to call such cases diphtheria," remarks which are singularly sweeping, and distinctly untrue. A great many very "competent observers" hesitate between a diagnosis of follicular tonsillitis and diphtheria very frequently, and the author's distinguished countryman, Dr. Jacobi, has laid down

the axiom that these very cases of "follicular tonsillitis" which the "homœopathic persuasion," according to him, loves to call "diphtheria" are in reality pure and simple diphtheria. The fibrinous exudate, which the author relies on, is by no means a certain means of discriminating between tonsillitis and diphtheria, since the so-called membrane in the latter is often soft, pultaceous, and everything except fibrinous. As to treatment, the author believes in alcohol, and he has given twelve ounces of whisky daily to a child four years of age, as more potent for good than any other stimulant! Antisepsis, and chiefly corrosive sublimate (one-thirtieth of a grain every two or three hours, increased to one-fifteenth and one-tenth of a grain for a child of six), which may be continued for weeks, and calomel internally in large and continuous doses. In diphtheria it does not cause salivation or act as a cathartic. Two to five grains may be given every two hours until the bowels are moved. The author gave, in one desperate case of a boy four years old, one hundred and sixty grains in three days, with the production of only one natural stool a day, cleansing of the tongue, and return of appetite and liquefaction of the membrane.

As a blood restorative the tincture of chloride of iron $\bar{3}j$. v—xx. every two or three hours is indicated. This is usually given by the author along with the corrosive sublimate in glycerine or syrup of orange, and followed by a full dose of whisky. The calomel is best given in tablet triturates dissolved in milk. Local treatment is not of much service, but aims at destroying the disease germ and rendering the ptomaines inert, and softening and removing the membrane. Spraying or syringing the throat with a 1—1000 or 1—2000 solution of corrosive sublimate, or 1—30 solution of carbolic acid, is most serviceable. Lime-water as a gargle, or inhalation of the vapour of slaking lime every half-hour, is useful. The spray may be used afterwards. Shreds of membrane are then expectorated. The digestive ferments are useful as solvents to the membrane. Local treatment should be employed every half-hour, or oftener, and the patient not be allowed to sleep past the time.

In the discussion on this paper (Denver Med. Assoc., Dec. 18, 1890),

Dr. CASE remarked that he had never seen a better solvent of membrane than peroxide of hydrogen, and that, though tracheotomy had been disastrous in his practice, he had had five recoveries out of fifteen cases of intubation.

Dr. WEIST confirmed the good effects of hydrogen peroxide, claiming that with its use sprays of corrosive sublimate were unnecessary.

Dr. BRYANT believed in chloride of iron as a local application, and

Dr. ELANER in ferric alum applied on a pledget of wool to the membrane every three hours. It shrivels the membrane.

Dr. PFEIFFER believed that longer tracheotomy tubes than those in general use would save many lives, by being able to reach below the membrane in the trachea.

R. Norris Wolfenden.

Neisser (Königsberg).—*Case of Diphtheria of the Skin.* "Deutsche Med. Woch.," 1891, No. 21.

A BOY, five years old, with diphtheria of the pharynx and larynx, had the

skin round the anus covered with white pseudo-membranes. The whole part was infiltrated. Death occurred. The bacteriological examination of the diseased parts showed that they were filled with diphtheritic bacilli, and the case is of special interest as being the first in which Loeffler's bacillus has been found in cutaneous diphtheria. *Michael.*

Schwalbe (Berlin).—*Rare Complications of Diphtheria.* "Deutsche Med. Woch.," 1891, No. 21.

(1) A BOY, two years old, had diphtheria of the tonsils and the larynx. Two days later inferior tracheotomy was performed. The tracheotomy wound became inflamed and infiltrated, and death occurred from hæmorrhage of the wound. No decubital ulcer was found. (2) A boy, four years old, with diphtheria of the fauces and larynx, had tracheotomy performed with momentary good results. Two days later severe bleeding occurred from the tracheal wound. No cause for it could be found in spite of enlargement of the wound to the sternum. A ramified bronchial membrane was removed. The bleeding ceased and did not return. Cure followed. The author believes that there was pneumorrhagia caused by the discharge of the membrane. (3) A boy, seven years old, with diphtheria of the fauces and larynx, had tracheotomy performed. Five days later the canula was removed, but had to be re-introduced on account of attacks of suffocation. But in spite of the canula, the dyspnœa did not cease, and there arose an emphysema, covering the neck and the face. There was also pneumo-thorax. By puncture the air was removed from the chest, and the condition subsequently improved, ending in cure. *Michael.*

Van Wyck, R. C. (New York).—*Practical Notes on the Prophylaxis and Treatment of Diphtheria.* "Med. Rec.," Feb. 28, 1891.

ALL persons exposed use by spray, brush, or gargle a 25 per cent. solution of peroxide of hydrogen four times daily. The bedroom is fumigated with the vapour of cresoline once in twenty-four hours. In the stage of invasion Van Wyck gives from 3 to 5 or even 10 grains of calomel, rubbed up with about 2 grains of soda, dry on the tongue every four hours till green spinach stools are produced. He believes that this treatment leads to a limitation of the membrane. He sprays the false membrane with peroxide of hydrogen, 1 to 3 of water, but paints any circular patch with the full strength of the peroxide. After all the membrane is removed he paints the diseased surface with bichloride solution, 1 to 2000. "Milk punch is given every hour, and as strong as the patient can bear." [The details of the methods successfully adopted by any individual practitioner for carrying out the principles which most of our *confrères* accept are not without interest, even if they are hardly "epoch making."] *Dundas Grant.*

Frere, A. H. (Bradford).—*Treatment of Diphtheria.* "Brit. Med. Journ.," March 28, 1891.

THE author confirms the statements of Dr. Illingworth as to the efficacy of the biniodide of mercury, and its non-induction of mercurialism.

Hunter Mackenzie.

Pearson, C. Y. (Cork).—*Tracheotomy in Diphtheria.* "Brit. Med. Journ.," April 18, 1891. Cork Med. and Surg. Assoc.; March 11, 1891.

THE author made reference to the relative methods of tracheotomy and intubation, and considered the latter should have a trial—first, in children under three years; secondly, where the hygienic surroundings were unfavourable for tracheotomy, or where skilled attendance could not be obtained; thirdly, where the patients were unwilling to permit the cutting operation. A discussion followed, which was not reported.

Hunter Mackenzie.

Lyonnet.—*Articular and Peri-Articular Complications in Diphtheria.*

A PATIENT, thirty-one years of age, had a sharp attack of diphtheria in the pharynx, followed by paralysis of the veil of the palate two months afterwards. Both knees became swollen. The arthritis is thought by the author to be due to atrophic mischief of venous origin.

Joal.

Holroyde, J. (Chatham).—*Alternation of Scarlet Fever and Diphtheria.* "Brit. Med. Journ.," April 18, 1891.

THE author records three cases which appear to show the co-existence of the two poisons under one roof.

Hunter Mackenzie.

Bates (Leeds).—*Croup treated by Nitrate of Silver.* "Brit. Med. Journ.," April 18, 1891. Leeds Med. Chir. Soc., April 3, 1891.

THE author relates the case of a child who recovered from "croup" after the local use of a solution of nitrate of silver, eighteen grains to the ounce. In the discussion which followed, speakers for and against this remedy took part.

Hunter Mackenzie.

Ungar (Bonn).—*Treatment of Whooping Cough with Quinine.* "Deutsche Med. Woch.," 1891, No. 18.

RECOMMENDATION of the internal use of this drug.

Michael.

KOCH'S TREATMENT OF LARYNGEAL TUBERCULOSIS.

KOCHS (Strasburg).—"Therap. Monats.," 1891, No. 4—reports: (1) A patient, thirty-four years old, with tuberculosis of the lungs, and swelling of the laryngeal mucous membrane; aphonia. After some injections of 0·0015—0·02 the swelling of the mucous membrane diminished, so that the local bands could be seen. But as there was no further improvement the treatment was discontinued. (2) A patient, thirty-two years old, with commencing infiltration of both apices, and chronic laryngitis, without ulcerations. After eleven injections of 0·0015—0·015 the laryngoscope showed swelling of the epiglottis, large ulcerations on the inter-arytenoid space and the ventricular bands. Difficulty in swallowing. A short time later, death.

TANGL (Tübingen).—"Deutsche Med. Woch.," 1891, No. 19—describes

a case of tuberculosis of the tongue. A patient, twenty-five years old, with tuberculosis of the lungs and slight affection of the larynx, was treated with fourteen injections of 0'001—0'01. After the last injections, little vesicles on the tongue arose, which changed during the next day into ulcers, in the circumference of which arose new ulcers. In extirpated pieces bacilli were found. Two months later, death occurred. The *post-mortem* examination showed tuberculosis of the lungs, the larynx, and the intestine, and a great tuberculous destruction of the tongue. An exact examination showed that there were true miliary tubercles present.

KLEINWACHTER (Breslau)—“*Deutsche Med. Woch.*,” 1891, Nos. 20 and 21—reports : (1) A patient, twenty years old, with tuberculosis of the lungs, hoarseness, redness and swelling of the vocal bands and arytenoid cartilages. After five injections no local change was remarked. (2) A patient, forty years old, with tuberculosis of the lungs, redness and swelling of the vocal bands and arytenoid cartilages. After some injections new ulcers appeared on the vocal bands, disappearing during the continuation of the treatment. (3) A patient, twenty-six years old, with tuberculosis of the lungs and larynx. Improvement after some injections. (4) A patient, twenty-four years old, with tuberculosis of the lungs and larynx. No improvement.

MICHELSON (Königsberg)—Verein für Wissenschaftliche Heilkunde in Königsberg. Meeting, April 20, 1891—reports three cases. He showed (1) a boy suffering from lupus of the larynx and pharynx, and cured by Koch's method. (2) A girl, nineteen years old, had on the right side of the septum an ulceration filled with granulations. In the mouth were present also follicular infiltrations over the right tonsil. During the next year the other side of the septum became also diseased, and also the skin of the nose up to the upper lip was infiltrated, and flat ulcers existed on the posterior pharyngeal wall. After sixty-six injections of, *in toto*, 0'14 the ulcers were cured. (3) A patient, thirty-nine years old, with lupus of the mouth and pharynx, the tongue, and larynx. The larynx was stenosed, and could not be seen because of the deformed and infiltrated epiglottis which covered it. After seven injections improvement occurred. The weight of the patient increased nineteen pounds. *Michael.*

Editor of the “*British Medical Journal*” (London).—*What is the Value of Tuberculin?* “*Brit. Med. Journ.*,” April 25, 1891.

A LEADING article dealing with the papers of Drs. Bristowe, Heron (*vide infra*), and others. The article is of a judicial and impartial nature, and merits the attention of our readers. *Hunter Mackenzie.*

Bristowe, J. S. (London).—*An Address on the Koch Method of Treatment for Tuberculosis.* “*Brit. Med. Journ.*,” April 25, 1891. South London District (Metropolitan Branch) Brit. Med. Assoc.

Heron, G. A. (London).—*Koch's Remedy in Lupus, and in Pulmonary Tuberculosis.* “*Brit. Med. Journ.*,” April 25, 1891. Med. Soc. of London, April 20, 1891.

THESE two communications may be taken as representing the views of those who do not believe, and of those who believe to a certain extent

in Koch's treatment. Dr. Bristowe quotes with approval the opinion of Virchow:—"That Virchow's calm, philosophical, and businesslike account not only gives no support to Koch's theories, and holds out no hope of the successful treatment of tuberculosis by Koch's method, but proves beyond question that all the fears of its most sceptical opponents are more than justified."

Dr. Heron considers "that the striking effects of tuberculin upon tuberculous processes which could be seen and handled justified its use in early cases of pulmonary tuberculosis." He gives a tabular statement of all the cases treated by him, which should be carefully studied by all interested in the subject. His cases of laryngeal tuberculosis treated by this method were too few to justify a decided opinion, but, so far as they went, *not one of them did well.*

The discussion which followed the reading of these two papers elicited, on the whole, opinions unfavourable to Koch's method.

Hunter Mackenzie.

Charasac.—*Koch's Lymph in the Treatment of Laryngeal Tuberculosis.* "Revue Laryngologie," March, 1891.

AFTER treating the historical portion of the subject, the author relates a case in which the symptoms were aggravated by the treatment. He concludes: "Tuberculin, by the congestion and inflammation which it produces in the larynx, might even in slightly advanced cases lead to new infiltrations, and turn a localized into a generalized tuberculosis. Under its influence tuberculin may cause slightly progressing cases to become acute."

Joal.

NOSE AND NASO-PHARYNX, &c.

Robertson, W. (Newcastle-on-Tyne).—*Empyema of the Antrum.* "Brit. Med. Journ.," March 28, 1891.

THE author makes a few observations on the etiology, symptoms, and treatment of this disease. He prefers to perforate through the canine fossa, as thereby the lowest level of the antral cavity is reached.

Hunter Mackenzie.

Moure.—*False Empyema of the Antrum of Highmore.* Société Française d'Otologie et Laryngologie, May, 1891.

IN connection with chronic abscess of the maxillary sinus, it is well to note that some affections of the nasal fossæ may resemble the former. The author has observed two cases in which there was a foetid suppuration, abundant and unilateral. By rhinoscopic examination anteriorly one could see, at the extremity of the middle turbinated bone, an inflammation of the membrane near the opening of the antrum. Destruction of the hypertrophied tissue with the cautery cured the patient. It was in reality a suppurating pouch, and the sinus itself was healthy.

Joal.

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Luc.—*Empyema of the Antrum of Highmore, following Erysipelas of the Face.*
"Archives Laryngologie," March, 1891.

LUC was for long a believer in the dental origin of abscess of the antrum, but his opinion is modified by the observation of a case where erysipelas of the face nine months previously had existed. After opening into the nasal fossa, the pus was shown to have streptococci in chains. *Joal.*

Ziem (Danzig).—*Extraction of a broken Irrigation Canula from the Antrum of Highmore.* "Berliner Klin. Woch.," 1891, No. 17.

THE extraction of a thick piece (10 mm. long and 1 mm. thick) was executed by a steel wire. *Michael.*

Hall, F. de Haviland (London).—*Chronic Atrophic Rhinitis.* "Brit. Med. Journ.," April 11, 1891. Med. Soc. of London, April 6, 1891.

IN his paper, the author remarked that age and sex were important etiological factors, the majority of cases usually commencing before the sixteenth year, and the proportion of females to males being as seven to two. Phthisical and anæmic persons were more subject to it (ozæna). In regard to treatment, he recommended removal of the crusts, and the subsequent anointing of the interior of the nose with vaseline containing oil of eucalyptus, in the proportion of one drachm to the ounce. "Listerine," mixed with water in the proportion of one to ten, was very useful as a deodorizer and disinfectant. Mr. Spencer Watson agreed as to the presence of a family taint. He suggested that there was a close analogy between this disease and lupus of the nose, and that both might be due to the same bacillus. He mentioned a case which had got well after accidental infection by gonorrhœal infection. *Hunter Mackenzie.*

Bronner, Adolph (Bradford).—*Case of Chronic Hypertrophic Rhinitis, with Polypi, treated with Trichloracetic Acid.* "Brit. Med. Journ.," April 4, 1891. Bradford Med. Chir. Soc., March 17, 1891.

THE author reports this acid, during application and subsequently, as not so painful as chromic acid. *Hunter Mackenzie.*

Roulin.—*Hypertrophy of the Nasal Mucous Membrane, with Hoarseness.*
Société Française d'Otologie et Laryngologie, May, 1891.

THE patient had a distinct hypertrophy of the posterior portion of the middle turbinated bone, with hoarseness. This growth was removed, and the voice was at once re-established. *Joal.*

Zurllinger (Budapesth).—*Cysto-pneumatic Degeneration of the Nasal Middle Turbinated Bodies.* "Wiener Klin. Woch.," 1891, No. 19.

THE middle turbinated sometimes is converted into an air-containing osseous bulla. Anterior rhinoscopy shows it in such cases to be a round tumour, covered with normal mucous membrane. This malformation causes the symptoms of nasal obstruction, such as nasal *timbre* of the voice and reflex neurosis. Sometimes also the cribriform bone is degenerated, and, as well as the turbinated, is filled with viscid fluid. The diagnosis may be made by transillumination or by puncture. The operation must be performed by galvano-cautery. *Michael.*

Lewy.—*Nasal Polypi.* Verein für Innere Medizin in Berlin, Meeting, April 20, 1891.

THE author exhibited nasal polypi in which he had found asthma crystals. He pressed the polypi, and in the expressed fluid the characteristic crystals were found a few days after. He believes that they are products of dissolution. *Michael.*

Quinlan, F. J. (New York).—*A Case of Convergent Squint corrected by Adams' Modified Operation for Deflected Septum.* "New York Med. Rec.," May 30, 1891.

A BOY fell from a height and struck on the bridge of his nose. The nose was deflected to one side, and the obstruction caused an alteration of the voice. At the same time the eye on the convex side of the nose turned inwards and diplopia was complained of ten years later. Adams' operation was performed, the fractured septum being kept in position by means of cotton wool plugs for forty-eight hours, and afterwards by Goodwillie's nasal tube (of soft india-rubber). The operation was successful, the nose maintained a symmetrical position and the strabismus disappeared. The author suggests that there may have been some spasmodic condition of the ocular muscles analogous to that spasm of the bronchial muscles which has been so often observed to be excited by nasal obstruction and to be cured by its removal. *Dundas Grant.*

Mondroux.—*Contribution to the Study of Coryza.* Thesis, Paris, 1891.

THESIS after observations made in the clinic of Dr. Natier. The author, after dealing with the history of the question, concludes by saying coryza ought to be considered a symptom often found in the course of severe nasal affections. *Joal.*

Gluck, Isidor (Omaha).—*The Treatment of an acute attack of Hay-Fever.* "Med. Rec.," May 16, 1891.

THE author applies, by means of absorbent cotton on a holder, a solution of cocaine-phenol, and after some contraction and a moderate amount of anæsthesia has been produced, a one per cent. solution of sulphate of atropia. Internally, small doses of aconitine every hour or two. *Dundas Grant.*

Saverny.—*Epistaxis in Bright's Disease.* Thesis, Paris, 1891.

SHOWING that epistaxis is common in interstitial nephritis, and rare in the other forms of Bright's disease. *Joal.*

Lavrand.—*Recurrent Erysipelas of the Face, of Nasal Origin.* Société Française d'Otologie et Laryngologie, May, 1891.

OBSERVATION on a patient who suffered from erysipelas of the face after each menstrual period. The attacks ceased after removal of the adenoid vegetations with aseptic precautions. *Joal.*

Peyrissac.—*Electrolysis of the Nasal Fossa.* "Rev. de Laryngol.," May 1, 1891.

DESCRIPTION of a *séance* of twenty-nine minutes in a case of thickening of the membrane of the nose. The monopolar method, most disagreeable

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and painful, was employed. The phenomena are recorded minute by minute. *Joal.*

Ziem (Danzig).—*Historical Remarks upon Diminution of the Visual Area in Nasal Diseases.* "Centralblatt für Augenheilkunde," May, 1890.

POLEMICAL remarks.

Michael.

Loewenberg (Paris).—*Otitis Media and the Nasal Douche.* "Berliner Klin. Woch.," 1891, No. 18.

HAVING taken a nasal douche, the patient always has water in his nose, and likes to blow the nose. By this blowing, masses of fluids are often driven into the middle ear and cause inflammation there. Therefore, blowing must be prevented by the physician, and otitis media will not then occur. If he has blown the nose, he must perform Toynbee's method, which consists in swallowing water whilst the nose is closed.

Michael.

Wagnier.—*Contribution to the Study of Adenoid Vegetations, with Chronic Purulent Otitis Media.* Société Française d'Otologie et Laryngologie, May, 1891.

THE author describes six cases, showing the decisive action which removal of these tumours has in restoring hearing. The cases yielded when all other methods had failed. *Joal.*

Madeuf.—*After-Treatment in the Removal of Post-nasal Adenoid Vegetations.* Société Française d'Otologie et Laryngologie, March, 1891.

THE author, in order to prevent the persistence of chronic rhinitis, advised the introduction of a layer of muslin on the nasal fossæ. *Joal.*

Hirschberg (Zurich).—*Contribution to the Knowledge of Retro-Pharyngeal Tumours.* "Langenbeck's Archiv.," Band 41, Heft 4.

(1) A PATIENT, thirty-one years old, had headache for half a year. The left eye was now protruded and chemotic. The retro-pharynx was filled out by a large tumour. Extirpation was performed, but the tumour recurred. Enucleation of the bulbus followed, and there was a second recurrence. Death ensued, and the *post-mortem* examination showed that nearly the whole left side of the head was occupied by a tumour, which also entered the cranial cavity, and dislocated the bones of the face of this side. The weight of the tumour was 3500 grammes. The microscopical examination showed that it was a perivascular sarcoma. (2) A patient, twenty-six years old, had a large tumour filling out the whole naso-pharynx and the choanæ. Galvano-caustic operation was followed by cure without recurrence. The tumour was a fibro-sarcoma. The author concludes that the nature of the tumour must be made out by microscopical examination, in order to decide if it shall be operated upon by simple rhinological treatment or by severer surgical measures. *Michael.*

Migge.—*Aus dem Ambulatorium des Privatdocenten Dr. Michelson in Königsberg. Ueber Nasenrachenpolypen und ihre Behandlung ohne Praliminar Operation.* (From the Ambulatorium of Docent Dr. Michelson in Königsberg. "On

Naso-pharyngeal Polypi and their Treatment without Preliminary Operation.")
Inaugural Dissertation, Königsberg, 1891.

THE general opinion of surgeons concerning the removal of naso-pharyngeal polypi is, that as a preliminary operation, resection of the upper jaw, either temporary or permanent, is absolutely necessary. Dr. Michelson has removed such tumours in seven cases, *per vias naturales*, without any preparatory operation.

(1) A patient, seventeen years old, with typical naso-pharyngeal polypus of the base of the cranium. Removal of the greater portion of the tumour by the galvano-caustic cutting wire; successful treatment of the stump by electrolysis (fibro-sarcoma).

(2) Cystoid degenerated soft fibroma in a lady twenty years old. Operation with Stoerk's choanal forceps, and by the cold wire.

(3) Large fibroma of the naso-pharynx in a patient twenty-two years old. Operation by avulsion with the cold wire.

(4) A girl, fourteen years old, with a cystoid degenerated fibroma. Operation by avulsion with the cold wire.

(5) Cystoid degenerated naso-pharyngeal polypus in a girl thirteen years old, arising from the posterior part of the nasal septum. Operation by avulsion with the cold wire.

(6) A fibroma of the naso-pharynx in a lady fifty-two years old. Operation with the galvano-caustic cutting wire.

(7) Ecchondroma of the naso-pharynx, combined with a small naso-pharyngeal polypus. Removal of the ecchondroma by a cutting chisel, introduced through the mouth. The polypus was removed by scissors.

Michael.

MOUTH, TONGUE, TONSILS, PHARYNX, &c.

Weir.—*A Submaxillary Composite Cartilaginous Tumour.* New York Surgical Society. "Med. Journ.," Feb. 7, 1891.

THE author showed a tumour of the size of a Tangerine orange, which he had removed from below the inferior maxilla after it existed there eleven years. Its growth had progressed slowly and without much pain. It could be felt in the mouth close to the bicuspid teeth, and through an incision there two salivary calculi as large as peas were removed. After a delay of several months without any subsidence of the growth, he operated with the idea that the tumour was the result of an obstructed salivary gland. He enucleated it. It was found attached to the edge of the submaxillary gland, and was a composite cartilaginous growth similar to those commonly met with in the parotid region.

R. Norris Wolfenden.

Laurentieff, N. K. (Tzaritzyn).—*Salivary Calculi in Wharton's Duct.* "Saratovsky Sanitarnyi Obzor," 1891, No. 8, p. 215.

A PEASANT, aged thirty-two, applied to the author with the request "to remove a stone from under his tongue." He stated that three years previously he had extracted a small concretion from the same situation, while a fortnight before his coming to the writer another calculus escaped spontaneously. For the last three years he had been suffering from incessant sublingual suppuration. On examination, a stone was found just beyond the orifice of the right Whartonian duct. It was removed (through enlarged opening) by means of Daviel's spoon, after which another pytolith presented itself, lying two centimètres deeper, and then a third one came to sight, embedded still deeper. The extraction of the latter two concretions required some violence. The calculi were wedge-shaped, and measured $6 \times 7 \times 8$, $8 \times 10 \times 11$, and $7 \times 9 \times 9\frac{1}{2}$ millim. respectively.

Valerius Idelson.

Lempert.—*Necrosis of the Maxilla in a Child of Four Years.* "Journal Connaissances Médicales," January 29, 1891.

FOLLOWING upon measles. The affection began with catarrhal conditions in the stomach; next ulceration set in, and afterwards periostitis, which brought on maxillary necrosis.

Joal.

Samter (Königsberg).—*Lymphangiomata of the Oral Cavity.* "Langenbeck's Archiv.," Band 41, Heft 4.

(1) A GIRL, ten years old, developed a little spot on the under lip, which became much larger in two years. Excision was performed, and cure obtained. The examination of the specimen proved its nature to be lymphangiomatous. (2) A boy, eleven years old, had a tumour of the size of a cherry on the tongue. Its surface was covered with papillæ. Extirpation was performed, and cure resulted. It proved to be a lymphangioma. (3) A patient, forty years old, often had a swelling of the tongue, which subsequently became very much enlarged, especially on the left side. Ligature of the arteria lingualis was performed. Next day, œdema of the glottis occurred, necessitating tracheotomy. Pus was coughed out of the canula. After some complications, cure was obtained. Ten years later, recurrence occurred. On the right side of the tongue occurred a tumour of the size of a cherry, covered with little glassy vesicles. Extirpation was performed by thermo-cautery, and cure obtained. (4) A girl, ten years old, had a lymphangioma covering the greater portion of the right upper lip and a part of the oral cavity. Extirpation was followed by cure. (5) A girl, ten years old, had a flat tumour of the surface of the tongue, but as she had no discomfort at all, no operation was performed. If the tumour is covered with vesicles, the diagnosis is easy; if not, it is not always possible to recognise it. In all cases the connecting tissue was filled with lymphoid cells, and the lymph spaces were often changed into sinuous cavities. The tumours arise from embryonic changes. (6) A patient, six years old. The right half of the tongue had been since birth larger than the other, and this became subsequently much more marked. The surface of the tongue was glassy, and covered

with vesicles. Extirpation of cuneiform pieces, and treatment with thermo-cautery and iodoform, was followed by improvement. (7) A patient, seven years old, had a tongue so enlarged that it always hung out of the mouth seven centimetres. Its surface was dry and thickened. Cure was obtained by excision of large cuneiform pieces. The microscopic examination showed that it was cystic lymphangiectasia.

Michael.

Flatau (Berlin).—*Chronic Recurrent Herpes of the Mouth.* "Deutsche Med. Woch.," 1891, No. 22.

A PATIENT, thirty-eight years old, since seventeen years of age has had, in consequence of typhoid fever, an eruption of herpetic vesicles on the lips and the gum, recurring from time to time.

Michael.

Zelëneff, Ivan F. (Kiev).—*Syphilitic Chancre of the Lip.* "Vratch," 1891, No. 7, p. 212.

THE author related a case of a soldier in whom the right side of the lower lip was found to be occupied with an indolent, perfectly clean, oval erosion of the size of a farthing piece, its base being "almost soft." The submental and submaxillary lymphatic glands were enlarged and indurated, the right-sided ones being much larger than the left-sided, while the femoral and inguinal were normal. The genitals were sound, the body studded with roseola. It is instructive to note that the specific and contagious nature of the labial lesion had remained unrecognised for about two months, the practical result being that the man, who had happened to be simultaneously attacked with typhoid fever, had been allowed to lie in a common ward. The writer dwells on an extreme difficulty in diagnosing labial (or any extragenital) syphilitic chancres, since their outward appearance is subject to great variations. For the sake of illustration and comparison, Dr. Zelëneff adduces a case (from Prof. M. I. Stukovenkoff's clinic) in which the chancre, similarly situated on the lower lip, very closely simulated a cancrroid, the ulcer being considerably elevated, with everted edges, a cartilaginous base and a profuse discharge.

Dr. A. A. VVEDENSKY, of St. Petersburg, has recently reported ("Vratch," 1891, No. 1, p. 21) a case from Prof. V. M. Tarnovsky's private practice, where a hard chancre developed on the upper lip in an officer. The ulcer appeared shortly after the gentleman had happened to take some milk at a syphilitic peasant's hut, the man having a labial rash at the time.

Dr. M. A. TCHISTIAKOFF, of St. Petersburg (*ibid.*, No. 5, p. 160), has seen a case of primary syphilitic erosion (*erosion chancreuse*) on the lower lip in a prostitute, aged seventeen. Some time previously the author had published a case of primary syphilitic sore of the buccal mucous membrane in a young prostitute; *vide* the "Provincial Medical Journal," May, 1890 p. 306.

Dr. KREINDEL, of St. Petersburg (*ibid.*, No. 15, p. 390) has published a case of a soldier with a very characteristic Hunterian chancre on the upper lip, the infection having been contracted through smoking a cigarette thrown away by a syphilitic person.

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Dr. S. S. IAKOVLEFF, of St. Petersburg (*ibid.*, No. 18, p. 455), has lately described a case of a male peasant, aged thirty-eight, with a characteristic syphilitic chancroid erosion on the upper lip, near the left angle of the mouth. The lesion developed after smoking some cigarette stumps, collected by the foolish man on streets. [The author also observed another case, in a soldier of twenty-one, in whom a primary syphilitic sclerosis appeared about the right oral corner, the lesion being situated in such manner that it could be noticed only when the patient opened his mouth.—*Rep.*] *Valerius Idelson.*

Tchistiakoff, Mikhail A. (St. Petersburg).—*Syphilitic Chancres of the Tongue and Hard Palate.* "Vratch," 1891, No. 18, p. 455.

THE author reports the case of a young lady, aged twenty-one, who consulted him on account of an ulcer on her tongue. The examination revealed a most typical Hunterian chancre, situated on the dorsal surface of the organ. An inquiry elicited the fact that the lady's sweetheart was a syphilitic (of which she had been aware from the beginning), and that "they had been in the habit of mutually introducing the tongue into the mouth on kissing."

Dr. Tchistiakoff also describes another case, referring to an engineer, aged thirty-six, in whom a primary syphilitic ulcer was situated on the hard palate, near its junction with the velum. The gentleman stated that, being subject to frequently recurring throat catarrhs, and ordered by his medical attendant to make some irrigations, he had been often using pulverisators, borrowed from his syphilitic friends. The chancre had developed, apparently, on the site of a puncture accidentally inflicted by an instrument of the kind. *Valerius Idelson.*

Touzin.—*Herpes of the Tongue and Bucco-Pharyngeal Zona.* "Paris Medical," March 19, 1891.

THE case showed on the right side of the pharynx a group of vesicles with tumefaction, and red tonsils. There were also vesicles on the vault of the base of the tongue. *Joal.*

Scatliff, J. M. Elborough (Brighton).—*The value of the Tongue as a Respirator.* "Lancet," May 23, 1891. **Smith, Fred. A. A.** (Cheltenham). "Lancet," May 30, 1891.

DR. SCATLIFF considers that oral breathing may be practised without detriment to the air-passages if the tongue be curled up so that the tip of it reaches as far back as the soft palate, the air getting warmed in its passage through the irregular channel thus formed.

In the subsequent issue of the "Lancet," Dr. Smith has a tilt at this violent schism from the almighty nasal cult. He points out the received and well-known views as to the value of nasal respiration, and quotes Aschenbrandt's, Bloch's (not Block's), and Greville Macdonald's conclusive experiments in support.

[The truth of Dr. Smith's statement, that "we should see far less disease of nose or throat did everyone learn to breathe *solely* through the nose," is to us, and we are sure to Dr. Scatliff, quite unquestionable.

There is, however, an aspect of the question which the rhinologist is too apt to leave out of account, namely, that the primary object of respiration is to get a sufficiency of carbonic acid out of, and a sufficiency of oxygen into the blood, and that it is inexpedient on "purely physiological grounds" to sacrifice oxygenation for the sake of a bigoted devotion to the creed of exclusive nasal breathing. In cases where the nasal passages are insufficient for purposes of oxygenation, the method recommended by Dr. Scatliff as a valuable second resource (and which we have before heard of) is not to be lightly rejected. The object of nasal breathing is not—as would appear—to satisfy the ardent nose-worshipper, but to warm and *moisten* the inspired air, and the experiments of the able observers quoted amply prove this. There seems, however, nothing in the eternal fitness of things to negative the value of what we may call "oro-lingual respiration" as a subsidiary means of oxygenating the blood, if only in exceptional cases. There can certainly be much less harm in breathing as he describes, than through a nose in which, owing to atrophic disease or the *nimis diligentia* of the surgeon, the passages have been made patent by the diminution or removal of the turbinated bodies, to whose irregularities and blood-filled tissues the nose is indebted for its respiratory value. *In medio tutissimus ibis.* Dundas Grant.

Joseph (Berlin).—*Contribution to Glossopathology.* "Deutsche Med. Woch.," 1891, No. 18.

A PATIENT, twenty-three years old, had a swollen tongue. The surface was irregular; the papillæ circumvallatæ were enlarged. Treatment remained without effect. The diagnosis was glossitis superficialis. The author speaks of the differential diagnosis between this disease and leukoplakia linguæ. The latter may be treated with good effect by lactic acid. Michael.

Le Dibirder.—*Treatise of Lingual Neurosis, with Ulceration, giving references to the difficulty in treatment.* "Gazette Hebdom.," January, 1891. Joal.

Humphreys, F. R. (London).—*Perityphlitis complicating Tonsillitis.* "Brit. Med. Journ.," March 28, 1891.

A SIMPLE record of a case where the former complaint supervened on the latter. Probably a coincidence. Hunter Mackenzie.

Iakimovitch, N. N. (St. Petersburg).—*Syphilitic Chancre of the Tonsil.* "Bolnitchnaia Gazeta Botkina," 1891, No. 6, p. 184.

THE case refers to a soldier, aged twenty-two, who contracted syphilis, probably through smoking, a hard chancre occupying the whole left tonsil. The remaining faucial region and the oral cavity were perfectly sound. The left-sided cervical lymphatic glands (especially those situated behind the sternocleido-mastoid muscle), as well as the submaxillary ones, were considerably enlarged (*cf.* Vidal's paper in the JOURNAL OF LARYNGOLOGY, April, 1890, p. 157); of the right-sided glands, only one of the submaxillary and one of the cubital were slightly swollen.

Valerius Idelson.

Zélénéff, Ivan F. (Kiev).—*Syphilitic Chancre of the Tonsil.* "Vratch," 1891, No. 15, p. 386.

A YOUNG recruit, aged twenty-one, who had been in close contact with a syphilitic peasant family before his departure to the ranks, began to experience some difficulty in swallowing about three weeks after his entering the service. Shortly afterwards there supervened enlargement of lymphatic glands, and, later on, rash over the body and face. For about a month and a half he was treated by various doctors for "sore throat" and "acne." On examination by the author, about the end of the period, the "acne" proved to be typical, papular and pustular syphilides (forming on the face a characteristic corona veneris). The right tonsil was slightly congested, but markedly enlarged, and protruding into the fauces. On its inner edge there was situated a painless, whitish, cartilage-hard, elevated ovoid patch, with a shallow depression in the centre. The right-sided submaxillary lymphatic glands were greatly enlarged, markedly deforming the outlines of the side of the neck, while the left-sided ones were swollen but slightly. The cervical, axillary, cubital, and the right mamillary glands were also considerably increased in bulk. According to the author, tonsillary hard chancres occur amongst soldiers (at least, in Russia) by no means rarely, but they are frequently either overlooked altogether or mistaken for "catarrhal angina," "tonsillitis," and such like affections (*cf.* the JOURNAL OF LARYNGOLOGY, September, 1889, p. 383).
Valcrius Idelson.

Körte.—*Demonstration of a Specimen of the Pharynx after Extirpation.* Freie Vereinigung der Chirurgen Berlin, Meeting, Dec. 8, 1890.

THE patient had an ulcer on the posterior wall of the pharynx. An excised piece showed the existence of cancer. Tracheotomy, tamponing of the trachea, extirpation of the pharynx by pharyngotomia subhyoidea. Some months later, death occurred from pleurisy.
Michael.

Gellé.—*Anatomy of the Pharyngeal Artery.* Société Française d'Otologie et Laryngologie, March, 1891.

THE author has observed in the posterior part of the bucco-pharyngeal cavity an artery sufficiently large to show the pulsation synchronous with the pulse, evidently due to an irregular distribution.
Joal.

Lange (New York).—*Removal of a Pharyngeal Epithelioma.* "New York Med. Journ.," March 14, 1891.

THE growth involved the left wall of the pharynx and the soft palate, and was of six months' duration. After splitting the cheek from the angle of the mouth upwards and downwards, the operator cut across the inferior maxilla in front of the angle, and made a curved incision in the submaxillary region for the removal of the glands, allowing also the escape of blood. Recovery was good; the mucous membrane from the other side of the palate and pharynx being drawn forwards in the healing so as to cover the gap. [More details would have been of interest.]

Dundas Grant.

Onodi.—*Fibrinous Pharyngitis of two years' duration.* "Revue de Laryngologie," March 1, 1891.

CASES shown at the Berlin Congress.

Joal.

Samter (Posen).—*Infectious Phlegmon of the Pharynx.* "Berliner Klin. Woch.," 1891, No. 18.

A PATIENT, thirty-eight years old, had eaten sausages, of which he had the impression that they had not been good. Next day occurred fever, intense redness and swelling of the fauces, followed two days later by jaundice, swelling of the liver, high fever, erysipelas of the head, and phlegmon of the limb. An incision into the limb was followed by discharge of fetid pus, and death subsequently. No *post-mortem* examination was made. No other cause than the sausages could be found.

Michael.

Vaton.—*Gout in the Throat.* "Gaz. des Sciences Med. de Bordeaux," Dec. 21, 1890.

THE patient showed an inflammation of the tonsils, pillars and veil of the palate. The tumefaction rapidly disappeared as soon as the pain in the toe manifested itself.

Joal.

Couetoux.—*The Role of the Soft Palate in Respiration.* "Annales Maladies d'Oreilles," March, 1891.

THE author further develops the thesis maintained by Smesler in 1881. Respiration is nasal or buccal—not both at the same time.

Joal.

Brulant.—*Foreign Bodies in the Esophagus.* "Bulletin Méd. du Nord," Dec. 26, 1890.

OBSERVATION on a patient who swallowed, during a fit of hysteria, a set of false teeth. Three days afterwards, at the *post-mortem* examination, the teeth were found eight centimètres from the heart. Behind, a large tear was formed with pus and food in the mediastinum.

Joal.

LARYNX, &c.

Michelson (Königsberg).—*On the Presence of Sensations of Taste in the Larynx.* "Archiv. für Path. Anatomie," Band 123, Heft 3.

To prove the sensibility of taste in the larynx, the author has made researches upon twenty-five persons. He introduced, without touching the mouth, a probe covered with quinine into the larynx. In all cases except one the persons said that they had a bitter taste. Saccharine gave a sweet taste. These sensations may be caused by the glosso-pharyngeal nerve, which gives branches to the epiglottis, the *rami communicantes* of the same nerve *cum nervo vago*, and the *nervus laryngeus medius*.

Michael.

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Dejerine.—*Aphasia, Subcortical, with Unilateral Paralysis of the Larynx.* Société Biologie, February, 1891.

THE author reports two cases in which paralysis of the right vocal cord existed, caused by a lesion in the white substance underneath the cortical centre of the laryngeal nerves. *Joal.*

Wagner (Halle).—*Median Position of the Vocal Band in Recurrent Paralysis.* "Virchow's Archiv.," Band 100, Heft 3.

SEE the report of the tenth international congress. *Michael.*

Meyer, Arnold.—*Case of Co-ordinate Hysterical Spasm of the Glottis.* Inaugural Dissertation. Wurtzburg, 1890.

A CHILD, twelve years old, suddenly got cramps and loss of consciousness. This was often repeated, and was sometimes combined with aphonia. Hypnosis and faradization were applied without success. Some time later, permanent aphonia of spastic nature occurred. Cure was obtained by systematic exercises. The author believes that the best name for this condition is "co-ordinate glottic spasm." *Michael.*

Wagner (Halle).—*Ventriloquy.* "Münchener Med. Woch.," 1891, No. 17.

PHOTOGRAPHIC reproduction of the lip and the mouth of a ventriloquist, and a description of the condition of these organs. The mouth is nearly closed; respiration so gentle that a feather placed before the mouth does not move. The soft palate is strongly retracted, the tongue is in normal position, and the larynx also is not abnormal. *Michael.*

Bleuler (Rheinau).—*Theory of Ventriloquy.* "Münchener Med. Woch.," 1891, No. 21.

THE difficulty of explanation of ventriloquy lies in the circumstance that the vocal bands gave a strong voice in spite of the weak air stream which passes them. The author, an experienced ventriloquist, was examined by Dr. Laubi in Zürich, who found that the larynx was compressed on all sides, and that the epiglottis was strongly depressed, so that the anterior part of the vocal bands could not be seen even by application of cocaine. *Michael.*

Batten (London).—*Dry Catarrh of the Larynx, with Crusts.* "Brit. Med. Journ.," April 25, 1891. Harveian Soc. of London, March 19, 1891.

EXHIBITION of a child recovering from this complaint.

Hunter Mackenzie.

Luc.—*Stenosis, Acute, of Specific Origin, Suppression of the Dyspnoea by means of the Curette without Tracheotomy.* "Archives Laryngologie," March, 1891.

THE patient, aged forty-three, was cyanosed—two swellings could be seen in the arytenoid region. The patient did not desire tracheotomy. Krause's forceps with Heryng's curette were used, and the case did well. Antispasmodic treatment completed the cure. *Joal.*

Brebión.—*Pachydermatous Laryngitis.* "Revue Laryngologie," Feb. 1, 1891. CRITICAL review and bibliography of the subject. *Joal.*

Fraenkel.—*Pachydermia.* Aertzlicher Verein in Hamburg, Feb. 17, 1891.

THE author exhibited a specimen of typical laryngeal pachydermia.

Michael.

Luc.—*Hæmorrhagic Laryngitis.* "Archives de Laryngologie," March, 1891.

THE patient, aged seventy-seven years, was seized with hæmorrhage when coughing, and the writer noticed an acute catarrh of the larynx, with general congestion of the membrane. Near the cartilages of Santorini, on the left side, there was a distinct though small erosion in the centre of an ecchymosis, which appeared to be the point from which the hæmorrhage sprang.

Joal.

Heymann, P.—*Liebreich's Treatment of Laryngeal Tuberculosis.* Balneologische Gesellschaft, Meeting, 1891.

THE author has stated improvement in many cases of laryngeal phthisis, but only in one case has he obtained the complete cure of an ulcer.

Michael.

Ashby, H. (Manchester).—*Sloughing Ulceration of the Larynx in a Child affected with Tuberculosis.* "Brit. Med. Journ.," April 25, 1891. Manchester Path. Soc., April 8, 1891.

DEMONSTRATION of a specimen of ulceration of the pharynx and larynx of a child, aged twenty months, who had died from catarrhal pneumonia and miliary tuberculosis. The laryngeal dyspnoea had been relieved by intubation (tube removed on fourth day). The child died after contraction of measles and aggravation of an existent pneumonia. After death there was found extensive superficial ulceration of the pharynx on both sides, exposing the muscular layer. The vocal cords were also ulcerated, and there was a superficial ulcer in the trachea corresponding to the end of the tube. The ulceration was not tuberculous, but inflammatory, resembling cancrum oris. It appeared to have been a sequel of measles, but the excoriation of the mucous membrane by the tube may have aided in its commencement.

Hunter Mackenzie.

Bronner, Adolph (Bradford).—*Multiple Fibromata of the Vocal Cords.* "Brit. Med. Journ.," April 4, 1891. Bradford Med. Chir. Soc., March 3, 1891.

NOTES of case were read. Nine operations under cocaine had been performed.

Hunter Mackenzie.

Zuffinger.—*Laryngeal Tumour.* Gesellschaft der Aerzte in Wien, Meeting, April 27, 1891.

THE author exhibited a girl, ten years old, with a tumour of the left vocal band, producing stenosis of the larynx. The tumour was diagnosed to be scleroma, and the microscopical examination of an excised piece demonstrated the presence of scleroma bacilli.

Michael.

Garel.—*Spontaneous Disappearance of Papillomata in Children.* Société Française d'Otologie et Laryngologie, May, 1891.

THIS occurred in a young girl, four years of age, who had influenza in 1890, and afterwards contracted a laryngeal affection, characterized by pro-

gressive hoarseness resulting in aphonia. In May and June dyspnoea followed. Laryngoscopic examination showed a mass of papillomata over the left vocal cord and in the inter-arytenoid commissure. On the 11th of June tracheotomy was performed. On the 30th of July the canula was withdrawn, and the voice found to be perfect. *Joal.*

Hooper, Franklin H.—*A Case of Tumour of the Larynx, showing Amyloid Degeneration.* "New York Med. Rec.," March 7, 1891.

THE patient complained of hoarseness dating from a cold acquired four years previous, "articulation" (? phonation) being almost impossible during the last two months. A growth was seen in the larynx, with a smooth surface of mottled appearance, being of a deep red colour with spots of a paler hue dotted over its surface. It appeared to be attached to the upper surface of the left vocal cord, but on removal by means of a snare (after a few unsuccessful attempts), it was found to spring also from the ventricle. The author uses a four per cent. solution of cocaine, believing that if the drug acts at all, it will do so as well in this weak solution as in the stronger one. On microscopical section, the tumour was found to be covered with normal epithelium, but its main bulk was made up in some parts of myxomatous tissue, in others of fibrous tissue, many fibres being thickened and hyaline. Here and there were rounded masses of transparent tissue, staining a mahogany brown with iodine, as did also the coats of the large blood-vessels with which the growth abounded. The growth was a telangiectatic myxo-fibroma with hyaline and amyloid degeneration. *Dundas Grant.*

Grant, J. Dundas (London).—*A Case of Intrinsic Cancer of the Larynx treated by Thyrotomy.* "Brit. Med. Journ.," March 28, 1891.

A DETAILED and careful report, with illustrations, of a case referred to in previous numbers of this Journal. The operation was performed on 27th August, 1890, and a supplementary note, dated 9th March, 1891, states that "the patient continues well and hearty, and pursues his ordinary avocation." His further progress and history will be watched and noted with interest. (*See this Journal, p. 302.*) *Hunter Mackenzie.*

Chavasse (Birmingham).—*Unilateral Laryngectomy.* "Brit. Med. Journ.," April 18, 1891. Midland Med. Soc., March 18, 1891.

EXHIBITION of a boy, aged five, upon whom two years previously right unilateral laryngectomy had been performed for stenosis owing to inflammation and repeated intubation. The boy, who wore a modification of Gussenbauer's apparatus, could speak in a hoarse whisper, but with a phonal reed the voice was distinct and audible for some distance. *Hunter Mackenzie.*

Lane, W. Arbuthnot (London).—*Excision of the Larynx.* "Brit. Med. Journ.," April 4, 1891.

THE operation was performed for carcinoma in a man, aged fifty-one. A glandular mass under the sterno-mastoid could not be removed, and under the circumstances it was resolved to make no attempts to restore

the voice, but by carefully suturing the mucous membrane, which had been separated from the larynx, to the hyoid bone the pharynx was cut off from communicating with the trachea, and the comfort and ease of the patient during deglutition were greatly promoted. The author remarks that by operating in this way the risks and discomfort which usually follow on the operation are obviated. Most patients after excision of the larynx are, for a time at least, in much more pain, especially during deglutition, than before the operation.

Hunter Mackenzie.

Meyer.—*Total Extirpation of the Larynx.* New York Surgical Society. "New York Med. Journ.," Feb. 7, 1891.

THE author presented a larynx which he had removed entire, for cancer, from a man, sixty-five years of age, at the German Hospital, on November 11th. Six weeks previously the man had entered the hospital suffering from very severe dyspnœa. Tracheotomy was performed at once without anæsthesia. The superior entrance to the trachea was plugged by an osseous mass, which appeared to be sessile on the entire anterior circumference of the cricoid cartilage. The greater portion of it was removed with the bone scissors. Inferior tracheotomy gave quick relief. The laryngoscope had revealed an uneven, irregular swelling on the right side of the larynx, which, passing the anterior commissure, had begun to invade the left portion of the organ. The epiglottis was not involved. There was no reason to suspect tuberculosis of the larynx. As anti-syphilitic treatment, carried on for a number of weeks, did not change the intra-laryngeal swelling, the diagnosis of cancer was established, and the larynx was extirpated. Trendelenburg's tampon-canula failed to act; hence an iodoformized sponge with a thread was pushed down to the tracheal tube and iodoform gauze put on the top of this. By this means, and by keeping the patient slightly in Rose's posture, not a drop of blood entered the bronchial tubes. The larynx could be shelled off the anterior wall of the œsophagus without injuring the same. The epiglottis was not removed. During the first three days the upper portion of the trachea was packed as during the operation. Subsequently only a strip of iodoformized gauze was put in. A soft-rubber catheter, introduced into the œsophagus through the wound, permitted regular feeding. The patient had made a quick recovery and was now doing well.

R. Norris Wolfenden.

Meyer.—*Partial Extirpation of the Larynx.* New York Surgical Society. "New York Med. Journ.," Feb. 7, 1891.

THE author presented a specimen consisting of the left half of a larynx which had been extirpated for traumatic stricture on the 17th November. The patient had cut through his larynx, making an oblique wound, in an attempt at suicide. The knife had also opened the left side of the pharynx without injuring any important vessels. The man had then walked to the German Hospital, where he arrived about midnight. The house surgeon at once sewed the larynx at the side and in front, and also closed the external wound with stitches. The posterior aspect of the larynx and the pharyngeal wound were left open. A soft-rubber tube was introduced

through the latter into the œsophagus for feeding purposes. The right portion of the cut healed by primary union, but on the other, where the opening of the pharynx was, suppuration set in. Ten days after the accident, a tracheal tube with a hole at its curvature was inserted. The patient was unable to draw a single breath by way of the natural air-passages. Subsequent attempts at intra-laryngeal manipulations, carried out by very able specialists, proved unavailing. Neither from the mouth nor from the wound in the ligamentum conoides could any of the instruments be pushed through the larynx. The author, therefore, resolved to perform laryngo-fissure, and then seek to remove what was in the way. The trachea was first opened farther down, and a Trendelenburg's tampon-canula inserted, and then the larynx split. It was found that a dense cicatricial mass encroached upon the posterior aspect of the larynx.

This had resulted in the entire obliteration of the lumen of the organ. In addition thereto, the upper portion of the cut left half of the thyroid cartilage had slipped downward and inward from the lower one. The left portion of the larynx, except the cricoid cartilage, was extirpated. The wound was loosely packed with iodoform gauze. The tampon-canula remained in for thirty-six hours, and was then exchanged for an ordinary one. The patient had made an uninterrupted recovery, the temperature never rising above 100 deg. F. He is still under treatment.

R. Norris Wolfenden.

Simon, Jules.—*Foreign Body in the Larynx and Trachea of an Infant.* "Revue des Maladies de l'Enfance," January, 1891.

IN a clinical lecture, the teacher says that extraction of these *per vias naturales* is not successful as a rule, and tracheotomy is usually required. A low tracheotomy is preferred, and a free incision into the trachea. The canula should not be introduced at once, as the expulsion of the foreign body may take place.

Isaël.

NECK, THYROID GLAND, &c.

Johannessen, Axel (Krishania).—*On the Etiology of the Propagation of Goitre in Norway.* "Zeitschrift für Klin. Med.," 1891, Bd. 19, Heft 1, 2.

CAREFUL researches proving the relation between endemic goitre and the silurian formation of the territories where it exists.

Michael.

Symonds, Charters J. (London).—*Goitre.* "Brit. Med. Journ.," April 25, 1891. South-East Branch, East Surrey District, Brit. Med. Assoc., March 12, 1891.

THE author describes the nature and treatment of goitre. Unilateral goitre is usually cystic, and has a distinct capsule, which could be easily dissected out without fear of hæmorrhage. Bilateral goitre is mostly parenchymatous, and as it is unwise to attempt removal of the entire

organ, resection of the lateral lobes was advised, leaving untouched the portion over the trachea, which covered the vessels and recurrent laryngeal nerves.

Hunter Mackenzie.

Bornis.—*Enormous Goitre.* XX. Congress für Deutsche Chirurgie, Meeting, April 1—4, 1891.

THE author exhibited a specimen of a colossal goitre extirpated by him. The tumour arose from the left portion of the thyroid gland, and nearly covered the abdomen. By the weight and extent of the tumour, the large vessels of the chest were dislocated, the vertebral column of the neck lordotic, that of the thorax kyphotic. The incision was seventy-two centimètres long. The tumour was a large cyst.

Michael.

McBurney.—*Tumours of the Thyroid Gland.* New York Surgical Society. "New York Med. Journ.," Feb. 7, 1891.

A TUMOUR was exhibited of cystic nature, which the author had removed according to Socin's method. The operation had presented no difficulties, and a week had completed the cure. He also presented a tumour of the thyroid which had existed for three years. It was not a cyst, but a parenchymatous degeneration of the gland tissue, and was surrounded by a connective-tissue capsule. It was easily enucleated without injury to the healthy gland tissue remaining.

R. Norris Wolfenden.

Foxwell, A. (Birmingham).—*Post-manubrial Tumour.* "Brit. Med. Journ.," April 18, 1891. Birmingham Branch, Brit. Med. Assoc., March 20, 1891.

A BOY, aged sixteen, was exhibited, showing pressure symptoms, supposed to be due to goitre. It was found that the apparent goitre was owing to great hypertrophy of both sterno-mastoids, resulting from extreme difficulty of inspiration, caused by a post-manubrial tumour pressing on the bifurcation of the trachea. The boy developed a sharp attack of pleuro-pneumonia at the right base, and on recovery from this the tumour diminished by one-half, and the dyspnœa disappeared. The tumour was supposed to be a mass of enlarged glands.

Hunter Mackenzie.

SOCIETY MEETINGS.

BERLINER LARYNGOLOGISCHE GESELLSCHAFT.

Meeting, April 6—27, 1891.

LANDGRAF showed a retention cyst of the middle turbinated body of the right nasal cavity. Its wall was covered with cylindrical epithelium, and its contents were purulent.

B. FRAENKEL showed two cystically degenerated polypi.

ROSENBERG showed a patient with a membrane between the vocal bands of traumatic origin. The membrane was not so large as to cause dyspnœa.

SCHEINMANN showed a patient with carcinoma of the pharynx and larynx. The case had improved under treatment with pyoktanin and electrolysis.

ROSENTHAL showed a patient who had a bleeding into the mouth proceeding from a wound of the left tonsil, and which was treated by chloride of iron. No cause for it could be found.

SCHOETZ had observed such bleeding in patients suffering from cirrhosis of the liver.

KATZENSTEIN had seen them in malignant tumours and phthisis.

TREITEL had seen them in gouty patients.

LEWIN showed (1) a patient with specific ulcers of the tongue, and defect of the epiglottis; (2) a tracheotome used by him with good results for thirty years.

B. FRAENKEL showed a specimen of specific tumour of the epiglottis.

SCHOETZ did not believe that tracheotomes are practical instruments.

P. HEYMANN showed a patient, twenty years old, with luxation of the right arytenoid cartilage.

B. FRAENKEL had observed a similar case.

LEWIN had observed a tumour between the vocal bands, which was formed by the cricoid cartilage.

SCHEINMANN showed an incrustated foreign body removed from the nose.

HEYMANN showed a specimen of bullous dilatation of the ductus naso-lacrymalis.

CHOLEWA showed a nasal chisel.

SCHEIER showed a specimen from a patient, thirty years old, who died after a fall from a height, thirteen days after the accident, which caused luxation of the vertebral column of the neck. On the posterior wall was a decubital ulcer, produced by pressure of the vertebrae. *Michael.*

BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION,

Meeting held on June 19th, 1891.

Dr. DUNDAS GRANT, *Vice-President for England*, IN THE CHAIR.

Dr. SANDFORD, in the absence of the Hon. Sec., having read the minutes of the previous meeting, and these having been declared to be correct, a letter was read from Dr. Macintyre expressing his regret at not being able to be present.

The following gentlemen were unanimously elected Fellows of the Association:—FREDERICK AUGUSTUS SMITH, M.D., Portland House, Cheltenham; ARTHUR G. ROOT, M.D., Albany Medical College, Albany, N.Y., U.S.A.; JOHN WILLIAM REES, M.R.C.S., L.R.C.P., Throat Hospital, Golden Square, London, W.

ALTERATION OF RULE.

In the absence of Dr. GEORGE STOKER, Mr. LENNOX BROWNE brought forward the following proposed alteration in and addition to the present rule, viz. :—

“That papers and communications announced on the official programmes of the Association shall not be separately published until they have first appeared in the official journal of the Association. This rule shall not affect or prevent a *résumé* or report of the proceedings appearing at any time in any journal that may send a reporter to the meeting.”

He observed that they had received a very liberal offer for the publication of their transactions, and their publication could not fail to excite greater interest on the part of Fellows since it could be the means of disseminating a knowledge of the work that was being done, not only to those Fellows who could not always be present, but generally would thus tend to and advance the interests of the Association. He urged, therefore, that it would be only proper for them to exercise that small amount of self-denial which would be involved by refraining from publishing papers read at their meetings in any other journal until they had first appeared in the JOURNAL OF LARYNGOLOGY, which was now recognised as their Official Journal. He thought that such a course would commend itself to them as being loyal to their publisher. The resolution was seconded by Dr. BARCLAY BARON.

The PRESIDENT, in reply to questions, further explained the object of the motion, and added that it was understood that the JOURNAL OF LARYNGOLOGY would publish a report of the proceedings as early as possible. It was, after all, only a question of reciprocity as between the Association and their publisher.

The proposal was then agreed to unanimously.

Mr. LENNOX BROWNE then moved to alter Rule 18 as to the formation of a quorum, so that three members of Council would suffice instead of four. He explained that there being so few metropolitan members it was sometimes difficult to get together the requisite number of members to carry on the business.

This motion was also agreed to.

It was proposed by Mr. Lennox Browne, and carried unanimously,

“That Messrs. Coutts and Co., 59, Strand, London, W.C., be authorized to honour the signature of the hon. sec. of the Association for the time being—the hon. sec. at present being Dr. George Stoker. That Messrs. Coutts and Co. shall be advised of any change in the secretaryship of the Association, and are empowered to charge a commission of one guinea per annum, commencing in June, 1892.”

The SECRETARY then read various correspondence.

Mr. LENNOX BROWNE suggested that the ballot should not be declared until the end of the meeting. He regretted that the name of the President did not figure on the programme, and also that the fact that

the President's address was to be delivered had not been made more conspicuous.

The meeting agreed to declare the result of the election as the last item of business on the programme.

At this juncture, Dr. Hunter Mackenzie, the President, having arrived, took his seat in the Presidential chair. He apologized for the delay in his arrival, but explained that he had been present in good time in the afternoon, but though he had waited some time, only three provincial members had put in an appearance, and he had been compelled to adjourn the meeting in consequence. He observed that he thought the London members were singularly wanting in courtesy in not having attended.

Mr. LENNOX BROWNE pointed out that it was sometimes more difficult for them to be punctual for the very reason that they were London members. He suggested that probably many members like himself had expected the meeting to take place at three o'clock as heretofore, not having remarked the change in the hour. To overcome the difficulty of officers being elected who might be supposed to at once resume their duties, he moved that the report of the scrutineers as to the result of the ballot be made the last item on the business of the meeting.

Mr. J. M. REES then read the notes of the following three cases (for Dr. Norris Wolfenden), the patients being shown in an adjoining room :—

CASE I.—*A Mixed Case of Syphilis and Tubercle*.—J. W., female, teacher in good circumstances, aged thirty-six, with atresia of the naso-pharynx and superficial ulceration of the soft palate, swollen and ulcerated epiglottis, and distorted glottis. Throat symptoms commenced with slight pain and ulceration of soft palate nine years ago. Four years ago she first came to the Throat Hospital presenting a membranous web between the vocal cords and aphonia, but no ulceration. The posterior fauces alone were then adherent to the pharynx. The web was destroyed by the galvano-cautery, and voice restored. The patient was not seen again for three years, during which time she had had several severe attacks of ulceration. There was at the time of her first visit to the hospital no sign of phthisis, and no history of syphilis could be obtained. Now, the palate was adherent to the posterior wall of the pharynx, so that the naso-pharynx is almost entirely cut off from the oro-pharynx, save for a perforation the size of a pea, situated a little to the left of the uvula. Her condition when she came to the Throat Hospital, Golden Square, on Oct. 10, 1890, was : Atresia of the naso-pharynx as described, but with a superficial, irregular, ill-defined ulceration of the soft palate, the area of which would be equal to that of a florin, and covered with grey granulations and mucous secretion, and at times with a thin grey filmy membrane, which scraped off easily, leaving a bleeding and rather nodular surface underneath ; an uniformly enlarged epiglottis with a similar ulceration along its apex ; no enlargement of arytenoids or ary-epiglottic folds, but a very curious state of the glottis. The right vocal cord had been destroyed, and, as a substitute, the right ventricular band had become stretched and altered to simulate a vocal cord, being anteriorly in

the exact position of the anterior portion of the vocal cord, but as it proceeded backwards it became wider, and curved, so that it attached itself to the right side of the left arytenoid, but somewhat above the level of the left vocal cord. This altered ventricular band became so pale, glistening and fibrous-like, that at first sight it might easily be mistaken for a mis-shapen cord. The voice was excellent and clear, though not strong. At this time there was no rise of temperature, no expectoration, or spitting of blood, no enlarged glands under the jaw, but a certain amount of discomfort in swallowing, and at times odynphagia. The ulceration has been most intractable, not responding in the least degree to any form of treatment—iodoform, iodide of potassium, or iodide of iron.

Daily curetting, scarifications and the application of lactic acid have produced no apparent beneficial change. Patient in March became an in-patient for three weeks, and all local applications energetically applied failed. Bacilli were found in specimens scraped from the palate and epiglottis. No nightly rise of temperature was observed.

June 14.—For the first time patient coughed up about an egg-cupful of blood. Coughs a good deal of a morning lately. Fresh-formed ulceration is to be seen, with but little accompanying swelling, on the right ary-epiglottic fold. Crepitations now are to be heard at the left apex, with slight tubular breathing and bronchophony; very limited. Her history of syphilis was vague, but the state of the palate, epiglottis, and distortion of the glottis, made matters plain. The ulcerations on the epiglottis on its laryngeal surface were typical of tubercle, and bacilli were found in specimens scraped from the surface. It is curious that her discomfort and pain in swallowing was not greater; but pain she only complained of after the parts had been subjected to irritation. Possibly the combination of the two diseases might be credited for this alleviation.

CASE II.—*Case of Multiple Papilloma in a Child.* The child, aged ten and a half, has been under treatment since November, 1890, for this condition, the growths springing from the surfaces and edges of both vocal cords, and the anterior surface of the arytenoids and the ventricular bands, and a large mass of growth springing from the inter-arytenoid commissure. Three warts have lately appeared on the right hand. The history of the child's condition reveals that she has never had a voice. There are no signs of congenital syphilis, the child being robust in appearance. There are no post-nasal growths present. She has on two occasions been to large general hospitals without the condition being recognised. The growths have been removed by operation with the ordinary Mackenzie forceps on several occasions by Mr. Rees. Though the larynx has been once quite clear of growth, and the voice restored, the growths have recurred, so as to almost defy treatment. There has never been any dyspnœa. All kinds of local medication (lactic acid, iron, zinc, &c.) have been tried without result. The growths are probably congenital in origin. The coincidence of warts on the hand with laryngeal growths is interesting as showing the predisposition to papillomatous growths in more than one situation in the body. A case of this kind had previously been mentioned to the society as occurring in Dr. Wolfenden's

practice, where an aural polypus, papilloma of the uvula and laryngeal papilloma, existed simultaneously in an adult man.

CASE III.—*Complete Atresia of Naso-Pharynx.* The patient was a married woman, aged thirty-nine, and though a very indistinct history of syphilis (such as loss of hair and some throat trouble) could be obtained, there was no doubt as to the nature of the condition. The whole of the soft palate and the uvula throughout its whole length were completely attached to the pharynx, leaving no aperture of communication from the pharynx into the naso-pharynx. This fleshy curtain was of a fair degree of thickness. She had been under treatment for three years when she came with atresia (complete) of the naso-pharynx, and which had supervened six years after the first onset of ulceration in the pharynx. During these three years there had been several severe attacks of ulceration of the posterior wall of the pharynx, which had yielded to large doses of iodide of potash and cauterization.

Dr. SANDFORD read the notes of the following case :—*Foreign Body lodged at Base of the Tongue for several Years.*

J. L., aged forty-seven, consulted me in December last. He complained of increasing difficulty of articulation, some difficulty in swallowing, and of a swelling in the right submaxillary region. He suffered extreme pain from time to time when the swelling, he said, appeared to become inflamed, and he then obtained considerable relief from local applications, such as poultices, etc., under medical advice. Of late the trouble had become unbearable, and the patient had lost considerably in weight and general health. Externally the right submaxillary gland was swollen, and extremely hard, red, and glazed.

On examining the interior of the mouth, I noticed the tongue to move with great difficulty at the right side, and, on raising it, a thickened, ulcerated patch appeared at its base on a level with the position of the last tooth. Most of the teeth were absent. The ulcerated surface was soft to touch, but bled profusely. The whole presented an extremely malignant appearance. On searching with the finger I felt some unusually hard substance at the base of the ulcer, and with some difficulty I extracted by means of a forceps a white, chalky body, which afterwards proved to be a tooth covered over with deposit, which had evidently been *in situ* for a long time, and had burrowed its way downwards between the jaw and the tongue. On enquiry, the patient informed me that he recollected having been on a severe drinking bout several years previously, shortly before his throat trouble commenced, and to have had some "disputes" with a comrade, during which the tooth, he thinks, might have been dislodged from its socket, and found a resting-place beneath the tongue. As to the nature of the ulcer and swelling, I give a guarded diagnosis, but every abnormal condition gradually disappeared under treatment after the removal of the cause of irritation, and in a month the patient was quite well.

Sir MORELL MACKENZIE related that he had once removed a foreign body from the throat which had been *in situ* for fourteen years. The foreign body in question was a pin originally about two inches long, but the piece removed was only about half an inch long, the other portion

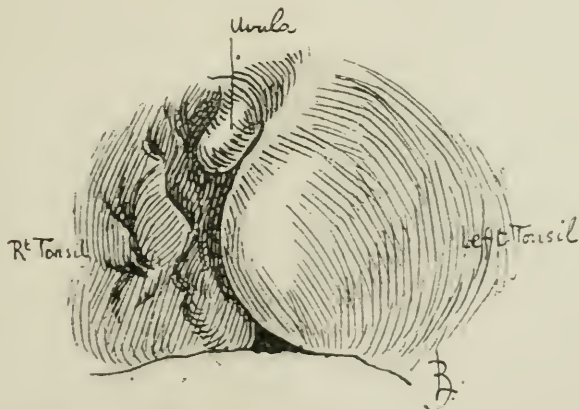
having corroded away, and the part that was left being curiously thickened in an irregular way by the action of the tissues on the metal. The patient was a lady who lived at the Cape of Good Hope. There had been many attempts made to remove the pin, all of which had been unsuccessful. It was in the right hyoid fossa, only the extremity being visible. The pin had been pushed almost vertically downwards along the side of the larynx, and only the small black point presented. He managed to get hold of and removed it, and at first a good deal of inflammation resulted. The patient ultimately went away quite well.

Mr. WINGRAVE asked whether there was a tooth missing in Dr. Sandford's case?

Dr. SANDFORD, in reply, said there were indeed several.

Mr. LENNOX BROWNE then read notes of a *Case of Lymphadenoma of the Tonsil*, the patient, who was present, having been previously examined by the Fellows.

Rachel H., aged forty-eight, married, residing at Cardiff, was admitted on June 4, 1891, into the Central London Throat, Nose, and Ear Hospital, complaining of difficulty of swallowing, of two years' duration. Personal history: She is a woman of somewhat full habit, stout and flabby, of pale complexion and somewhat bluish lips—in fact, of very oedematous appearance. She has "never experienced a day's illness in her life" till twenty-seven months ago, when present illness commenced with the expectoration of large quantities of phlegm, and slight difficulty in swallowing. These symptoms, with vocal and articulative weakness, gradually increased. She has never suffered with bleeding, either from nose or uterus. There has been no loss of flesh, but her paleness has markedly increased during the past twelve months, coincidently with the



increase of the size of the swelling. Family history: Father died, aged sixty, of a decline. Mother died, aged sixty, of a disease exactly like what the patient has now. Had four brothers and sisters, who died at different ages from decline. She has borne six children, who are all living and healthy.

State on admission: She speaks as if her mouth were full of food,

and articulation is almost obscure ; the swallowing is extremely painful and difficult, which condition has increased rapidly during the last five weeks. Cannot swallow solids at all. There is neither cough nor pain, except when taking food. She is troubled with slight dyspnœa on exertion. On examination : There is a large roseate, tense and slimy mass to be seen occupying the situation of the left tonsil, and extending into the faucial aperture considerably beyond the middle line, and displacing the uvula. It is resilient, only slightly painful on manipulation, and does not fluctuate. The right tonsil is almost equally prominent, but deeply furrowed, and has more the appearance of an ordinary hypertrophied gland, whilst the left looks almost as if it were the subject of inflammatory œdema. The uvula is compressed and pushed forward, as well as displaced, to the right of the median line. The tongue is protruded sluggishly, but straight, and is not much swollen. Hearing, taste, and smell : Normal. Heart : Slightly dilated ; action regular. Lungs : Normal. Thyroid gland is apparently atrophied. Lymphatics : There are several enlarged and painless glands to be felt in the neck and left axilla. Spleen is not enlarged. Urine : Normal. Blood : Hæmoglobin, 9 per cent. ; red corpuscles, 4,000,000 per c.m.m. : white corpuscles, 1 in 200. No pigment spots anywhere.

June 8. Mr. Lennox Browne removed the greater portion of the enlarged right tonsil with the wire *écraseur*, with the result that in forty-eight hours she could swallow with great comfort, and speak more clearly, and expressed herself as feeling better than she had done for many months.

June 15. Examination showed that only the anterior portion of the right swollen tonsil had been removed, for another large mass was seen to be fungating from the posterior of the fauces. This was easily snared with the *écraseur*, and removed. The left side was then attacked, and several large pieces were evulsed by means of the wire loop and curetting. The whole mass from the two sides weighed nearly 400 grains.

Mr. WINGRAVE then read the pathological report on the growth in question, which was as follows :—

Microscopical Examination by Mr. Wyatt Wingrave, of the tissue removed, showed that it is composed almost entirely of small round cells, the protoplasm of which is very scanty as compared with the size of the nucleus, a characteristic of lymphoid cells : these are embedded for the most part in a homogeneous matrix. In parts the characteristic tonsil arrangement and structure is visible.

Nature : Histologically it belongs to the "lymphoid" group of tissues.

The author of the case remarked that the disease was of sufficient rarity to merit exhibition. This was only the fourth or fifth case he had witnessed, in a constant hospital experience of over twenty-five years. The improvement of the patient's health and complexion were very marked, and were evidently the result of the operation, for internal treatment, consisting of a mixture of iron and arsenic and pills of iodoform, had not been pursued long enough to account for the benefit experienced. At present there seems to be no disposition to recurrence.

Dr. DUNDAS GRANT observed that it was a very interesting case

and it showed very clearly the advantage of attending regularly the meetings of the Association. He had had the advantage of seeing this case when the patient first came for treatment, and thanks to his having heard Dr. Frank's valuable and interesting paper, he had been enabled to diagnose it to his own satisfaction and to that of Mr. Lennox Browne, who afterwards confirmed the diagnosis. These cases were rare, and it was easy to overlook their nature. One met more often with lymphosarcoma of one tonsil, but the bilateral enlargement, together with the presence of other enlarged glands in the body, helped one in arriving at a diagnosis of Hodgkin's disease.

Mr. LENNOX BROWNE then read an account of his second case, one of *Angioma of the Larynx, with traumatism*.

Mr. C. A. C., aged forty, residing at Windsor, first came to me on May 29, 1891. He complained of hoarseness, effort, and fatigue of the voice, which had existed for two and a half years. He believed that it originated after exposure to the influence of a dense London fog.

Replying to questions, he admitted that he had suffered pain low down on the left side of the throat quite recently, especially in swallowing, and that after talking for a short time, he had some gasping for breath.

I found considerable swelling and hyperæmia of the left side of the larynx, with what appeared to be some superficial ulceration of the pharyngeal aspect of the ary-epiglottic fold. This was covered with muco-purulent secretion, which did not disappear on spraying.

On enquiry of the patient, he told me that he had not seen any other throat specialist since he was first attacked, and my attention was not, therefore, directed to the possibility of traumatism as a cause of his trouble.

His general condition excluded any idea from my mind of either cancer or phthisis, and although the history was by no means confirmatory, there appeared some probability that the laryngeal lesion might be syphilitic. I accordingly prescribed some biniodide of mercury, and a diluted iodide compress to be worn over the larynx every night.

My attention had been so occupied with the condition I have described, and the swelling was so considerable, that I had not perhaps examined all the other parts of the larynx so completely as I should have done. However, my gratification to discover on the patient's second visit, a week later, that all sign of ulceration and inflammatory swelling had disappeared, except that the left cord was congested, was tempered by a surprise in the shape of finding a small, round, smooth growth, of a bright pink colour, at the anterior insertion of the vocal cords. On my telling him of this, the patient voluntarily confessed that he had not been loyal in his information to me on his former visit, for that he had suppressed the fact that he had quite recently seen another specialist on account of this growth, and had undergone eleven or twelve sittings for the purpose of its removal by the forceps. His last visit to this gentleman had been made less than a week before his first one to me; and on that occasion the forceps had been used six times. He had been informed that the growth was twice caught, but could not be removed, and finally

that, as the operation was admitted by the operator to be beyond his skill, he was recommended by him to a friend "over the way." The patient described the pain experienced at the last sitting as considerable, in fact as a regular "twister."

It was clear to me, therefore, that the condition I had seen a week before was due to traumatism, and this having been now reduced, I proceeded to at once remove the growth. This I was fortunate in effecting on the first introduction of a Gibb's snare into the larynx, which did not appear to require cocaineization, with the result of an immediate improvement of the voice, which increases each day; so that at the date of his third visit to me—June 17—it is almost normal.

Remarks.—I have not brought forward this case with the object of vaunting my own skill at the expense of another, but to illustrate a few points of some practical importance.

1. The danger of unguarded instruments for endo-laryngeal operations, which I have insisted on for the last fifteen years, and in which view I am glad to have been recently supported by Dr. Stoker and other Fellows of this Association. This danger is of course proportionate to the lack of experience and skill of the operator; but with guarded instruments, even if the growth is not removed, there is no fear of injury to normal tissues.

2. That while a growth in the anterior commissure of the larynx is, for obvious reasons, more difficult to seize with the forceps than in almost any other situation, it is absolutely one of the most favourable positions for the use of the snare, especially if the operator, having got the loop well in position, draws it forward on to the angle of the thyroid and presses the larynx from the outside—so as to make a good *point d'appui*.

3. The importance of microscopic examination of every intra-laryngeal growth on removal. In this case I should have judged from microscopic appearance that the little tumour was a smooth-surfaced papilloma or myxoma, whereas it turned out to be a thrombosed pile or angioma.

Lastly, the case affords an example of what is daily experienced in consulting practice, the extent to which one may be deceived by giving credence to the evidence of patients. Confessing myself, therefore, as misled by this patient's first mis-statement, that he had not recently been in other hands, I should offer the account of his previous treatment with much more reserve did it not bear internal evidence that it is the only reasonable explanation, in the light of after events, of the laryngeal condition as I first witnessed it.

Microscopical Examination of the removed Tumour by Mr. V. H. Wyatt Wingrave.—The size of the tumour is that of a small pea; it is of pink colour, and appears to have been sessile, as it has a clean cut and comparatively broad base. The surface is everywhere covered (excepting the base) with stratified, squamous, epithelial cells, on a well-defined basement membrane.

Below this, on one side, is seen an abundance of fusiform nucleated cells—visceral muscle-fibres; on the other, fine reticular connective tissue, showing slight mucoid changes, arranged very loosely, and con-

taining numerous spaces lined with epithelioid cells—evidently vascular channels or dilated capillaries—the walls being extremely thin.

Beneath this, and towards the centre of the tumour, the tissue becomes more dense, and the nucleated cells fewer, until a dense, non-nucleated laminated mass is seen, obviously non-vascularized fibrin, in the midst of which is some yellowish substance, evidently disintegrating blood. Scattered about the field are numerous masses of pigment, and several smaller vascular channels containing fibrin.

No gland substance is seen, and no evidence of a neoplastic process.

Nature of Tumour.—Judging from the larger quantities of pigment (*extra-cellular*), and the vascular evidences, it is highly probable that it is a "thrombosed pile or angioma," and that the fibro-myxomatous changes are secondary.

Histologically, it is purely innocent.

Sir MORELL MACKENZIE congratulated Mr. Browne on his success, and suggested that this might in part have been due to the fact that the growth when removed by him was possibly only hanging by a pedicle as the result of the preceding operations. The last attempt at removal had taken place only a week previously. Moreover, it was very rare that any accident occurred as the result of the use of the forceps. He himself had used them many hundreds—he might even say thousands—of times, and Mr. Browne had seen him use them many hundred times, and he was not aware that any injury had ever been done to any part of the larynx by him. He had used at one time a pair of tube forceps, but he had discontinued their use on account of the possibility of some part of the instrument becoming detached and falling down the trachea. It had happened to him once that a blade became thus detached, and since then he had entirely given up the employment of that instrument. He remarked that the previous operator in Mr. Browne's case appeared to have introduced the forceps no less than six times on one occasion, adding that he personally made it an invariable rule never to introduce the forceps more than once at a sitting. He admitted that there was great temptation to transgress this rule because it was so disappointing to the patient and to the surgeon to stop when the first introduction of the forceps had failed, and the patient being naturally anxious to have something accomplished urged the operator to make another trial. Nevertheless, it was a feeling that ought to be resisted. The case Mr. Browne had reported, however, was interesting, independently of the question of treatment, for growths of its peculiar structure were rare in the larynx. He had only met with five cases.

Dr. DUNDAS GRANT was not prepared to be quite so exclusive in the use of any instrument as either of the eminent speakers who had preceded him. One must be selective. There were cases in which the guarded instrument was sufficient, and in such cases it was their duty to make use of it. At the same time they ought not to discard the forceps altogether. It was sometimes necessary. He had found himself able to remove growths by means of the forceps after the snare had failed even in highly skilled hands. It was, therefore, only right to remember that there was a field of usefulness for the forceps. At the same time those who valued

the safety of their patients rather than their own capacity for manipulation would agree that the statement as to the better practice of using guarded instruments was a valuable one. It was, after all, only natural that the operator should have a leaning towards the instrument which he had been in the habit of using, but he ought to have an open mind in selecting the instrument for use in particular cases. He admitted, however, that with a growth at the anterior commissure of the cords no attempt should be made with anything but the snare for its removal. He used a Gibb's snare as modified by Dr. Bond so as to present either transversely or antero-posteriorly. There were, however, cases in which the forceps were equally to be preferred, and he instanced the case of a projecting body on one of the cords, which could be better removed by this instrument than by any other means. The idea of using the large forceps had been carried still further by Gouguenheim, of Paris, and the principle upon which this operator proceeded seemed to be irresistible. Dr. Grant pointed out that the forceps employed by Gouguenheim were very much heavier than Mackenzie's, but the cutting portion was an inch or an inch and a half in length, and the blades met each other with the most perfect coaptation. The beauty of these forceps was that there was a considerable amount of scope above and below the level of the growth. If they used a pair of the ordinary Mackenzie forceps below the level of the growth they caught the growth between the shanks of the instrument and did not effect its removal, whereas with Gouguenheim's forceps, having so much more vertical length to come and go upon, they would be pretty well sure of catching it. He was personally in favour of a judicious eclectism in the choice of instruments.

Dr. WARDEN mentioned a case of his own about two years since of papillomatous growth just underneath the left vocal cord. This growth always eluded the grasp of the forceps. He tried several times, adopting the plan suggested by Sir Morell Mackenzie of never trying twice at the same sitting. After four or five unsuccessful trials, it occurred to him to try that old-fashioned instrument, the horse-hair (bristle) probang, and with this he was enabled at once to achieve his object.

Sir MORELL MACKENZIE said he himself had made use of the probang, especially in children, and he had occasionally found it very useful. He pointed out that with a large instrument there was a possibility of injuring something, but still the importance of getting the growth away was so great that the risk sometimes had to be incurred.

Mr. WINGRAVE, in reference to Sir Morell Mackenzie's suggestion that the growth was possibly hanging by a thread, said that microscopical examination showed that there was a clean cut at the base, without any pre-existing ulcerative process.

Mr. LENNOX BROWNE, in reply, said that Sir Morell Mackenzie's generous suggestion as to what had been done by the previous operator did not account for the almost acute inflammation and swelling and distinct ulceration of the left side of the larynx, when the case was first seen a week after the first operation, and which subsided and healed so quickly as to clearly prove its traumatic origin. Certainly the growth was as cleanly cut off as possible, and there was no sign of any partial

removal previously. In this he was corroborated by Mr. Wingrave, who knew nothing whatever of the nature of the case when he made his examination. He confirmed the practical utility of the plan adopted by Dr. Warden. They all knew that Voltolini used a sponge, and he himself had used a large cotton-wool probang—the wool well secured in the same way. He added that it was ten or fifteen years since he had first had a Gibb's snare which would turn in any direction, and he thought Dr. Grant must be mistaken in believing that there was any novelty in such an arrangement (as that with which Dr. Grant has credited Dr. Bond).

Dr. DUNDAS GRANT then read the notes of the following three cases :—

CASE I.—*A Case of Tubercular Laryngitis of the Proliferative Type, Simulating Papilloma.* Thanks to the kindness of a medical friend, I am enabled to narrate to you the history of a case of tubercular laryngitis, of the type specified in the title of my communication, and to show you the parts involved, as removed on *post-mortem* examination.

Ernest U., a Frenchman, aged twenty-eight, came under my friend's care with dyspnœa and other symptoms of laryngitis, on the 1st of last May. His previous history, as given by himself was, that six years ago, after drinking some iced beer, he was attacked with what he understood to be laryngitis, for which he was treated in the *clinique* of Dr. Fauvel, the renowned Parisian specialist; ever since then his voice has been hoarse, and he has suffered from frequent cough, with the hawking of mucus. For the last three years, however, he has had no treatment for his larynx. There was no specific history, and beyond the fact that his mother died of pleurisy, nothing suggestive of a family tendency to tubercle.

On the night preceding his application for treatment, he was suddenly attacked with dyspnœa, became blue in the face, and had great pain in the throat. In the morning, when he first came under observation, he had undergone some degree of improvement, but he had much stridor, with difficulty in phonation and considerable dyspnœa.

On examination, his fauces were seen to be reddened, his epiglottis to be red and rather œdematous, his aryteno-epiglottidean folds very markedly so, and his vocal cords red, œdematous, and thickened, with much mucus adhering to them. The cords did not meet on phonation, and ulcers were observed on the right cord and right aryteno-epiglottidean fold. Examination of the chest showed some slight bronchitis, but no evidence of tubercle.

A 20 per cent. solution of nitrate of silver was applied to the larynx, and he had a good night's rest, his stridor next morning having diminished, and his face having lost its cyanotic tint, and the appearance of the larynx giving evidence of a lessening of the œdema.

On the 3rd of May the œdema was much less marked, and there could be seen springing from the right vocal cord a pedunculated growth, which disappeared on inspiration and came up between the vocal cords on expiration, so as to prevent any apposition of the vibrating edges during attempts at the production of vocal sound. The breathing on the previous night was rather worse, but improved on his sitting up.

My friend endeavoured on the 12th of May to remove the growth by means of laryngeal forceps. The larynx, however, was extremely intolerant, and the removal was postponed till, by daily application of cocaine, it should become more used to operative interference. Up till the 16th he was fairly easy, the œdema having practically disappeared, and the growth being easily seen. The œdema, however, then returned in the neighbourhood of the cords; the patient had, in the afternoon, an attack of dyspnœa, became blue in the face, sweated profusely, and had retraction of the chest walls on inspiration. His condition was almost immediately improved by the inhalation of carbolized steam, and he became fairly comfortable, although he had still considerable laryngeal stridor.

On laryngoscopic examination the cords and the whole of the mucous membrane were seen to be red. This condition continued; the growth did not enlarge to any noticeable extent, but there was considerable ulceration of both vocal cords, and of the ary-epiglottidean folds. The ulcers were of irregular shape, had yellow bases, and did not seem to be deep.

On the 2nd of June I had the opportunity of seeing the case, and of noting, in addition to the appearances above described, a sessile tumour of considerable size in the inter-arytenoid space above the level of the vocal cords. I ventured to diagnose the case as one of that form of tubercular laryngitis in which the outgrowths simulate benign neoplasms like papillomata, and to suggest that tubercle must be present in the lungs. I succeeded, in my hurried attempt, in detaching a small portion of the growth, but not sufficient for microscopical examination, or to give any relief to the patient.

An examination of the lungs was made by a physician of eminence, but he could find no definite evidence of tubercle of these organs.

Early in the morning of June 6th, the patient, who had still great dyspnœa, had an attack in which syncope seemed the chief factor rather than asphyxia, and he died in spite of the performance of laryngotomy.

On *post-mortem* examination the larynx presented the appearance which I now show you :—

On opening from behind the laryngotomy wound is first seen; above this and to the right is a small pedunculated mass, evidently hanging from what is left of the right vocal cord. Above this is an irregular mass of tuberculous tissue, extending as high as the ary-epiglottic fold, forming a large cushion, and occupying the whole of the right supra-glottic region, replacing the ventricular bands, and involving the sacculus. There is a similar mass on the left side, in a similar position, but no pedunculation. Just in front of the left arytenoid cartilage is a large ulcerated cavity, extending deeply to the thyroid cartilage. There is perichondritis of the cricoid cartilage on its inner surface. The ary-epiglottic folds are infiltrated and extremely thickened, the left showing signs of active ulceration. Everywhere there is evidence of great œdema, but there are no fistulous tracks. The posterior commissure was greatly involved, as is shown by microscopic examination. The epiglottis is unaffected.

The case illustrated several interesting points in connection with

tuberculosis of the larynx—(1st) its *imitative character*. In this instance the clinical appearance suggested simple papilloma, for which it might easily have been mistaken. Gouguenheim read before the International Congress of Laryngology at Paris in 1889, a very instructive paper on the relation of papilloma and tuberculosis of the larynx, to which I was to a considerable degree indebted for being able to diagnose, *intra vitam*, the nature of this case. I have seen two cases in which tuberculosis imitated carcinoma of the larynx so exactly as to lead to unfortunate operations by experienced laryngologists. (2nd) The degree to which the *physical signs in the thorax are masked by the co-existing laryngeal disease*.

In the discussion on Dr. Grant's case of tuberculosis of the larynx, Dr. SNOW agreed that when there was extensive laryngeal disease, it was very difficult to make out the presence of disease in the lung, and the lung mischief was consequently often found, *post-mortem*, to be much more extensive than had been supposed.

Mr. LENNOX BROWNE said the author was to be commended for bringing the subject before them, because it had not unfrequently been said that laryngoscopists never saw further than the throat, and in cases of laryngeal phthisis, overlooked the pulmonary disease. The author's frank acknowledgment of the difficulty often experienced in detecting the extent of the lung changes when the larynx was greatly involved, was a sufficient answer to this charge, and his experience would be confirmed by all laryngologists. The fair retort that chest physicians often neglected the larynx, was one which could not be so easily explained away.

Sir MORELL MACKENZIE was glad the author's remarks had been confirmed. He pointed out that in cases of tubercular aphonia, due to tubercular ulceration, they could not get vocal resonance, and this was felt to be such a great disadvantage by Dr. Stone, that he had invented a kind of musical instrument by which the patient was enabled to produce a sound for the purpose.

CASE II.—*A Case of Fibro-Sarcoma of the Palate removed by operation.* Mrs. N., aged forty-six, was sent to me by Dr. Sunderland, of Bexley Heath, on the 6th April, 1891, for my opinion concerning a tumour in her palate. The patient was a hearty, well-developed lady of active business habits, and was in the enjoyment of first-rate general health. She complained that at times, when she got hot and tired, her tongue seemed to swell and to come in contact with her tonsils and uvula. This first came on two years ago, and the symptoms then lasted with some severity for a short period, but diminished until they again became very prominent a few days previous to her coming under my observation.

On examination there was seen to be a general, and not very pronounced, bulging of the right half of the soft palate, which was noticeably hampered in its movements during phonation and nasal respiration, and a projection of the right tonsil. On palpation an ovoid tumour of dense consistence could be felt in the region described, and apparently continuous with the tonsil. The post-nasal space was singularly free, and the finger could with ease be passed up to both posterior nares. There was no ulceration, and the mucous membrane was pretty freely movable over the tumour. There were no enlarged glands.

The situation and growth of this circumscribed tumour suggested the probability of its being a fibro-adenoma, but the age of the patient, and the fact of its extending into the tonsillar region, left a possibility—in view of Mr. Stephen Paget's observations and deductions (St. Bartholomew's Hospital Reports) of its being sarcomatous in nature. In the former case the removal would be a simple matter, in the latter the difficulties might be considerable.

I advised operation, and—in *utrâque fortunâ paratus*—hoping for the more propitious of the two conditions, carried it out on the 10th of April with the assistance of Mr. Percy Jakins and Dr. Sunderland. The latter administered chloroform by means of Junkers' bottle and bellows, with a catheter attached. The layers of the soft palate were snipped through with scissors, and an opening was thus made through which I was able to introduce my finger so as to explore the tumour more accurately. I found that it was a firm, rounded, circumscribed mass, and that by means of my finger nail I could loosen it from its bed of connective tissue. It extended downwards externally to the tonsil, pushing that body inwards, but without invading its substance. On all sides, except the outer one, it was easily liberated, but it was there more firmly attached to the inner surface of the lower jaw. A free use of the finger-nail, and a very limited application of curved blunt-pointed scissors, enabled me to break down the adhesions without difficulty. The capsule of the tumour was slightly torn, but on careful examination it was ascertained that none was left behind. The tumour was then easily shelled out, and was found to be oval in shape and of the size of a bantam's egg. The posterior layer of the palate was left whole, and the hæmorrhage during the operation was quite insignificant.

The after-treatment consisted in the use of antiseptic mouth-washes, especially after food. Dr. Sunderland, who then took charge of the case, informed me that for a few days after the operation she was troubled with much coughing, owing in all probability to the blood inhaled during the chloroform narcosis, and that she had considerable pain on swallowing, but this soon passed off. Her temperature at noon for the first few days was 100°, 102°, 101°, 100°, and on the fifth day 98·4°. She had some swelling on the right side of the neck, close to the angle of the jaw, and could hardly separate the teeth, but these conditions speedily disappeared, and on the 30th of April, Sunderland examined the throat and observed that the position of the tumour was marked only by a few granulations.

The patient came to show herself to me on her way back to Guernsey. She then professed herself as perfectly well and comfortable, able to open her mouth and to swallow without difficulty. There was a small granulation at the situation of the wound but no trace of tumour could be felt.

The tumour, which weighed 470 grains, was invested with a firm capsule, and appeared to consist of irregularly massed fibrous tissue.

Mr. Wingrave kindly made a microscopical examination of the growth (a section of which is exhibited), and reported it to consist chiefly of fibrous tissue, with a few cells suggestive of sarcoma, and here and there a disposition of cells in imperfect gland-like formation. He considered it practically non-malignant.

CASE III.—*Subsequent History of a Case of Intrinsic Cancer of the Larynx treated by Thyrotomy.* The case of which I have now to give you the final report is that of a man whom I brought before the Association at the meeting on the 28th of November, 1890. The history of this case was reported in the proceedings of the Association in the JOURNAL OF LARYNGOLOGY for last January, and subsequently in the "British Medical Journal" of March 28th, 1891.

Briefly, he was referred to my care on August 23rd, 1890, by Dr. Gordon Holmes, who had made a diagnosis of carcinoma, in which my colleagues and I quite concurred. He had been hoarse for eight months, the voice gradually dwindling to a mere whisper, and he had latterly a pain running up to the left ear, apart from functional use of the larynx. There was a slight fulness of the left half of the larynx, and on laryngoscopic examination there was seen an ulcerated nodular mass occupying the whole area of the left vocal cord, extending also to the ventricular band. *The cord itself was completely immobile.* There was a slightly enlarged gland behind the thyro-hyoid space. I removed a small portion of the growth by means of forceps, and Mr. Wingrave promptly prepared a section which confirmed the diagnosis of epithelioma.

On the 27th of August I opened the larynx in the manner described in my previous communication, and removed the soft parts from the interior of *both* sides of the larynx. He made an excellent recovery from the operation, and left the hospital on the 22nd of September. Laryngoscopic examination showed on the right side an arrangement of the mucous membrane singularly like a vocal cord, and moving on phonation. The left side was occupied by a cushion-like fulness, covered with a healthy-looking mucous membrane. The glandular enlargement was certainly no greater (later it almost disappeared).

As I said in my report in the "British Medical Journal," the question of recurrence could only be answered by further observation. Unfortunately, though hardly unexpectedly, the evidence of the return of the growth was not much longer delayed, for, after having resumed his business avocation, the patient soon found that the production of his hoarse, but audible, voice became difficult and painful. He "caught a cold," and had a croupiness in his breathing. The tissues of the interior of the larynx were swollen, but, as looked at from above, no ulceration was visible, except below the anterior commissure. At this spot we had frequently seen a little mucus accumulate, and I, therefore, removed the silver-wire stitch I had left to retain the ake in conjunction. Strange to say, the right half of the larynx appeared the most severely affected, and on that side a lymphatic gland at the level of the thyro-hyoid space became distinctly enlarged. On May 6th I introduced a tracheotomy-tube through the tissues previously traversed by Hahn's canula; but, although his breathing was improved, no form of tube was found to be comfortable, and the patient sank more from pain and exhaustion than from any mechanical trouble arising from the growth.

On *post-mortem* examination the body was noted as thin, but not remarkably emaciated. In the middle line of the neck was the opening communicating with the larynx (continuity upwards of the

tracheotomy wound), from which some small fungating masses projected. On removal of the larynx, numerous hard lymphatic glands were discovered in front of, behind and beneath both sterno-mastoids—one particularly large one close to the right side of the hyoid bone—and several others scattered about the supra-clavicular regions. The larynx contained abundant evidence of new growth. On division of the cricoid cartilage posteriorly on the middle line, two symmetrical fungoid masses were seen almost filling the larynx, extending from the situation of the ventricular bands as far down as the bottom of the tracheotomy wound. The cricoid cartilage is only slightly involved by the growth, but the thyroid to a very great extent, especially the right ala. On the right side of the root of the epiglottis is a hole of the diameter of a goose quill, which is the upper opening of a sinus leading to the new growth. There is considerable thickening of the remaining soft tissues, but the epiglottis is evidently not involved. The largest (thyro-hyoid) lymphatic gland was found on section to be infiltrated with epithelioma. The others were free from that disease. The thyroid gland was uniformly enlarged, and very firm, but although its condition suggested clinically that it was infiltrated with malignant disease, the microscope showed that its enlargement was due to chronic inflammatory changes. The other organs were normal.

Satisfactory as this case is from the point of view of mere operative *technique*, the ultimate result is not of a kind to encourage operation even in such a comparatively favourable case. In this instance, the temporary freedom from the presence of the disease was bought at a decidedly too great sacrifice when we recall the duration of life enjoyed by some who have been treated by simple tracheotomy. I may recall to you a case illustrating this in my own practice, and which I brought before this Association on March 27th, 1889. I performed tracheotomy for her on the 26th of July, 1886, on account of dyspnoea threatening her life, and quite recently I heard of her as being still alive, though with enormous glandular swellings in her neck. Whether a prolongation of such a life is desirable is a difficult question to decide. The matter is narrowed down considerably when we reflect that in a large percentage of laryngeal cancer there is no hesitation possible in refusing operation. In the few remaining cases the question lies between operation, with the great probability of a speedy demise, but with the remote chance of respite or total reprieve, and tracheotomy, with a practically certain prolongation of a life of not inconsiderable discomfort. I hold that we are not justified in discarding extirpatory operations altogether, as long as the alternatives are clearly laid before the patient and his friends. At the same time there will always be cases where, as regards diagnosis, it is justifiable to entertain an amount of doubt—albeit philosophic doubt—and, accepting thyrotomy as being with modern *technique* a comparatively safe operation, I see no reason why it should not be practised for exploratory purposes, further proceedings being determined by the additional information thus obtained, the possibilities having been previously subjected to the judgment of the surgeon and the will of the patient.

Sir MORELL MACKENZIE showed a *specimen of a congenital growth in microscopical section removed from a young lady, twenty-two years of age, supposed to have had polypus from birth.* The nurse had removed some solid substance from the nostril when she was born, and she never afterwards was able to breathe through or smell with the nostril on that side. When the young lady came, a few weeks since, he found a large polypus occupying the left nasal passage. He had operated upon her a number of times, and removed a quantity of growth. Much, however, was left, and he therefore subsequently operated again under ether. Dr. Rawes, the demonstrator of physiology at the London Hospital, had made some sections of the growth for him, and he considered the growth to be a fibrous polypus, which had undergone mucoid degeneration. Considerable hæmorrhage had followed the last operation and had continued for two or three days. The interest of the case was partly pathological and partly clinical, on account of the great rarity of congenital growths in the nose. He knew of no other case of the kind on record, and polypi were in any case very rare among young people.

Mr. WINGRAVE asked what was the exact spot from which the growth arose.

Sir MORELL MACKENZIE, in reply, said from the inferior turbinated bone, in fact from the whole of the side of the nose, but not from the septum. It extended right back to the pharynx.

Mr. WINGRAVE said that judging from the histological features one had to consider the possibility of slight variations in development. It might of course have been congenital, but histologically this would not seem to have been the case.

Dr. RAWES observed that there was not much to be said about the structure, except that it was covered on one side by columnar ciliated epithelium. Underneath the basement membrane there was a good deal of adenoid tissue. These were not altered. Below there was a considerable quantity of fibrous tissue, with strangely-coloured cells in it. The structure contained a number of small spaces, which looked as if they had been filled with mucus. These had obviously run together, forming irregular spaces, separated by little shreds and remains of fibrous tissue. In places the tumour was seen to be highly vascular. In one place there was a capillary running through an angle, where it had undergone mucoid degeneration. It had struck him as curious that it should have been so vascular, and yet had degenerated. It was very unusual to find a purely fibrous growth undergoing mucous degeneration.

The result of the ballot was then declared, and the following gentlemen were elected as office bearers for the year 1891-92 :—

President : Mr. LENNOX BROWNE.

Three Vice-Presidents :

England—Dr. WARDEN, Birmingham ; Scotland—Dr. J. MAXWELL ROSS, Dumfries ; Ireland—Mr. KENDAL FRANKS, Dublin.

Six other Members of Council :

Metropolitan—Mr. MAYO COLLIER ; Dr. ORWIN ; Mr. HOVELL ; Dr. WOLFENDEN. Two Extra Metropolitan—Dr. J. DAVIDSON, Bournemouth ; Dr. BARCLAY BARON, Clifton.

Secretary : Dr. GEORGE STOKER.

The meeting then terminated.

NEW PREPARATIONS.

The Adhesive Electrode.

THIS very ingenious invention is destined to supplant entirely the somewhat defective and often cumbrous electrodes now in general use. No metallic plates, wash leather, or sponges are necessary, with all their disadvantages, these special electrodes being manufactured of some kind of composition which renders them pliable and elastic, besides being exceedingly cleanly. They adhere to the surface of the skin, and conduct a very even current. Their internal resistance, after experiment, is proved to be very much less than that of electrodes now in use. They can be made of any size, even so as to entirely supplant the cumbersome clay electrodes employed in abdominal electricity. With strong currents even, no blistering of the surface results. There is no doubt that these electrodes fill a much felt want in electro-therapeutics, and their great value has already been recognized by eminent physiologists and electricians in this country. We believe that they are obtained in standard sizes, so that uniformity of experiments may be secured. They are cheap, and decidedly preferable to any other kind of electrode. They can be obtained from H. Nehmer and Co., 40, Berners Street, London.

NOTE.

THE Editors trust that the detailed Table of Contents, started this month, and to be continued in future, will be of value to those desirous of looking up abstracts or other papers in the unbound numbers of the Journal for the current year.

THE
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AUGUST, 1891.

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Twenty-five reprints are allowed each author. If more are required it is requested that this be stated when the article is first forwarded to this Journal. Such extra reprints will be charged to the author.

The Editors are not responsible for opinions expressed in original Articles or Abstracts in this Journal.

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ANNOTATIONS.

The French Otological and Rhinological Association.

WE have much pleasure in calling the attention of our readers to the full report which we offer them this month of the Laryngological Proceedings of the French Otological and Laryngological Association. Our Gallic *confrères* certainly offer an example which we might well endeavour to profit by, as regards earnestness of purpose and thoroughness of organization in their great association of specialists. Subjects of considerable variety have, on this occasion, given rise to vigorous and animated discussion.

Among other papers, we would point to Dr. Garel's cases, illustrating the spontaneous disappearance of papillomata of the larynx after tracheotomy. We remember on one occasion the presentation, at a medical society, of two juvenile patients who had been the subjects of papilloma. In one, the presenter of the case plumed himself on having, by means of repeated applications of the forceps, succeeded in sufficiently clearing the larynx for respiratory and phonatory purposes without having had recourse to tracheotomy. In the case of the other, the surgeon who brought forward the child had achieved a complete cure of the condition by forceps operations and the continued application of perchloride of iron, *tracheotomy having been previously performed*. In the stronger light thrown upon the subject by Dr. Garel's observations and deductions, the question

naturally arises whether, in the first of the cases we have mentioned, it might not have been better for the patient if the satisfied operator had performed tracheotomy at the outset, and whether, in the second case, the curative effect was not as much the result of the tracheotomy as of the surgeon's endo-laryngeal operations.

Dr. Moure's paper on *True and False Empyema of the Antrum* was valuable in itself, and in the discussion to which it led. We fear there is now rampant an over-enthusiasm in the diagnosis of antral suppuration, and that healthy teeth have been ruthlessly extracted on insufficient grounds.¹ Dr. Moure points out a source of fallacy which has been illustrated in our recent abstracts (Klingel, JOURNAL OF LARYNGOLOGY, 1891, p. 69), namely, the imitation of the symptoms of antral suppuration by limited disease of the middle turbinated bone, and the uniform process of the sphenoid or the adjacent osseous structures.²

Dr. Ruault, the president, offered a very pronounced opinion in favour of Heryng's method of transillumination of the antra by means of an electric light in the mouth, giving some particulars, for which we must refer our readers to our report of his speech. Without, on the whole, breaking much new ground, our *confrères* have gone thoroughly well over a great deal of the old. We hope soon to see our own Laryngological Association quite as vigorous and as representative, and we shall not be disappointed in it if its "transactions" compare not unfavourably with the "Comptes Rendus de la Société Française d'Otologie et de Laryngologie."

New Treatment of Diphtheria.

THE highly unsatisfactory state of the therapeutics of this terrible destroyer of infantile life is assuredly in nowise better shown than by the amount of literature constantly devoted to the subject, and the number of systems of treatment continually being proposed. Pretty nearly every drug in, and out of, the Pharmacopœia has had its advocates, and still the sheaves are garnered, and the edge of the sickle has not been turned by drugs and systems.

Professor Seibert proposes ("Archives of Pediatrics," June, 1891) yet another system of treatment of pharyngeal diphtheria, which is interesting from some points of view. Basing his ideas upon the fact that the pharyngeal manifestations of diphtheria begin as a local process, and that this owes origin to the entry and penetration into the mucous membrane of the Klebs-Loeffler bacillus; that the pseudo-membrane is not the disease, but the result of the disease, and is "a safe guide to the diphtheritic inflammation below it"; that the chief treatment should be local, and that the removal of pseudo-membranes is useless, as the bacilli contained therein are of no further consequence, and that local treatment,

¹ Schütz describes two cases in which suppuration in the antrum appears to have been caused by the extraction of first upper molar teeth ("Monats. für Ohrenheilk.," July and November, 1890).

² In our review of Dr. Jeanty's work on "Latent Empyema of the Antrum" we reproduce *in extenso* his account of Lichtwitz's method of diagnosis. Vide p. 358 of this Journal.

as carried out generally, does not reach the *active* bacilli in the lower strata of inflamed tissue, and is therefore neither local nor germicidal; that wiping away the pseudo-membranes and applying strong antiseptics to the parts is also ineffective, as only tending to cauterize and infect the healthy surrounding mucosa, to rubbing in the bacilli into deeper parts, and is without germicidal effect, Professor Seibert has devised instruments for the purpose of bringing comparatively small, but very strong, solutions into *direct* contact with the bacteria which are in activity upon the lower stratum of the mucosa. The anti-bacillary medium to be used is the officinal and freshly-prepared chlorine water of the U.S.P., and with a special syringe (the chief feature of which appears to be that instead of one needle point there are five such points arranged on a flat disc) the points are pressed firmly in to their full length into the pseudo-membrane, so as to reach the inflamed tissue below, and chlorine water is injected into the part. Thus brought into direct contact with the active bacilli and cocci of diphtheria, these latter are immediately destroyed, and "the process comes to a standstill." The contact of the chlorine and the active germs is the foundation of the treatment.

After the injection a gargle of one or two grammes of tincture of iodine, and ten drops of concentrated carbolic acid, in four ounces of water, is given, a teaspoonful being alternately gargled and swallowed every fifteen minutes, from 6 a.m. to 12 at night; five drops for gargling, and half a teaspoonful every half-hour for swallowing, being given to younger children. Zinc and mercurial ointment is rubbed into the swollen glands every two or three hours or less, and an ice-bag adjusted over the swollen parts of the neck. It is claimed that where the process is localized, and the membranes are undermined by the chlorine injections, the temperature makes three to four degrees, and the œdematous swelling disappears. Though the pseudo-membranes remain in the throat for two to four days, they are harmless, but the mouth-wash keeps them from spreading the process. Of thirty-five cases, Dr. Seibert claims to have only lost two under this method of treatment, and none of his patients developed diphtheritic paralysis. If we could be sure that the arguments in favour of the treatment were not of the *post hoc, propter hoc* kind, we might be tempted to echo the author's remarks, that "these cases are 'sufficient to show that the chlorine water injections are 'efficient, local' and germicidal' enough to check the career of any diphtheria germs 'they come in contact with.'" At all events, the results are good, the treatment novel, and in view of the disappointing nature of most plans of treatment of diphtheria, we cannot afford to disregard any suggestion, based upon respectable data, for contending with this formidable disorder.

Chorea and the Pharynx.

OF all the numerous reflexes known to be connected with nasal and pharyngeal disorders, the one of those probably the least often observed has been chorea. Dr. Jacobi made some pertinent remarks upon this subject lately, in a clinical lecture addressed to students.

Directing their attention to a girl of thirteen, with interstitial pneumonia

and mitral insufficiency, he pointed out a twitching of the muscles of the face. "As long as the spasm is confined to the muscles supplied by one nerve—the seventh in this case—I think it better," he remarked, "not to speak of it yet as a chorea, but as a spasm of those muscles, or an affection of the nerve supplying them.....when you have an affection of muscles supplied by one nerve, look at all events for a local cause. Reflex conditions are very frequently the cause of general and local convulsions. The reflex convulsions of infancy and childhood are well known. Any little irritation of the intestinal tract, for instance, may result in general eclampsia, or a reflex irritation from an old cicatrix pressing on a nerve may give rise to general convulsions. On the other hand, local convulsions may take place from local irritation. You observe convulsive contraction of the diaphragm and other respiratory muscles, for instance, from tickling of the nose. A local nasal irritation will give rise to sneezing, which is a local convulsion. It may give rise to an attack of asthma, which is more or less a local convulsion, for there is convulsive contraction of some of the muscles belonging to the respiratory system, and particularly of the muscles belonging to the bronchi.

"You may have sometimes noticed in children convulsive twitching, as winking, shrugging of the shoulders, frowning from no other cause but a sub-acute or chronic nasal or naso-pharyngeal catarrh. In the beginning the convulsions are always confined to the face. The mucous membrane of the nose and pharynx is under the influence of the trigeminus. Its effect is to produce reflexes in the motor nerves, here the facial. In a number of children who have chronic catarrhs, you observe peculiar movements, as sniffing, which accompanies cold, a constant winking, an occasional frown, a twitching such as this girl has, sometimes extending to the shoulder, causing a shrugging of the shoulder on one side. It seldom goes any further. I have seen a very few cases in which a general chorea would follow simply the presence of a catarrh of the mucous membrane of the nose and pharynx. But in most of the cases which I have seen, the convulsions were confined to the face. I have described that as a partial chorea, sometimes terminating in general chorea. I was tempted to do that because I had seen a few cases in which, after the convulsions had remained local a long time, they finally became general. While speaking of chorea arising from the condition of the nose and pharynx, I may say that you will find on examination a very red pharynx, a good deal of mucus deposited over it, a sub-acute or an acute catarrh. The mucous follicles are very much elevated, a part of the mucous membrane shining-looking, denuded of its epithelium. In the case before us there is evidently a catarrh, not so much of the anterior nares as posteriorly and in the pharynx, and to this local irritation I believe the facial convulsions to be due. I hope you will remember these remarks, for it may be some years before they get a place in the text-books."

The Gibbes-Shurley Treatment of Phthisis.

WE may receive the advent of any new therapeutical system with a sceptical smile. There is certainly no branch of the healing art in which it is more easy to envelop so-called "research" with a pseudo-scientific glamour than therapeutics, to talk "physiology," which may, and very probably is, all wrong, but which has an erudite sound, and deeply affects the ignorant by its appearance of learning, to fix up a theory with a little physiology which will fit in—and there is always plenty to be dug up out of "Archives," "Annals," etc., which can be manipulated easily to suit either the one side or the other of an argument—to support it with a little research—often a few ill-conducted and worse-observed "experiments"—to throw in a few bibliographical references to show that you at least appear to respect the other great luminaries who have preceded you, and then write, write, write! and never to lose an opportunity of keeping your theory before the public—in print, at societies, everywhere. True, some people will think you an unmitigated nuisance, and will even scoff at your theories and your pretensions, but others who never read your theories will keep encountering your name, and that is fame now-a-days. But "theories" fail and "systems" are found wanting, and if the feeling of scepticism in modern therapeutics has been strengthened, we have largely those to thank who should have known better than to have encouraged this by their want of judgment.

When, therefore, we read of "the value of the inhalation of chlorine gas, and the use of iodine and chloride of gold and sodium hypodermically in the treatment of pulmonary consumption," we cannot but think of the goats' blood system, the sulphuretted hydrogen system, the tuberculin and cantharidinate of potash systems, and all the rest, and we may be excused if we do not exhibit any eagerness to accept any further "systems." The originators of this line of treatment, however, both being men "above reproach," we cannot afford to dismiss any work of theirs without paying it at least the compliment of examining it.

The authors have a theory, namely, that general tuberculosis and pulmonary phthisis differ considerably, the former being a general disease in which the anatomical lesions may be found in all organs of the body, the latter with anatomical lesions principally and primarily in the respiratory apparatus. The final course of tuberculosis depends upon a destructive metabolism in which toxalbumoses are formed. The tubercle bacillus may pervade the system, but cannot germinate unless it finds suitable pabulum, and this is caseous matter only.

Phthisis pulmonalis is located in the lungs, and is an inflammatory process, ending in permanent or destructive changes of the tissues, accompanied by deleterious chemical substances. The authors have been working with the endeavour to find something which would combine with and neutralize these toxalbumoses and arrest the disease. Chlorine gas, iodine, ammonium iodide, potassium iodide, the double salt of chloride of gold and sodium, liquor potassæ, potassium permanganate, iron arseniate, the mercurial salts, etc., will do good service in this respect. Of these, chlorine gas, iodine, and the double salt of gold and

sodium chloride chemically pure and in glycerine, are by far the most efficacious.

The chlorine gas is obtained from chlorinated lime by the addition of diluted hydrochloric acid (3ss.—5vi. of the former to 5i.—iii. of the latter added slowly in a saucer and stirred). Before the gas is evolved the atmosphere should be well charged with a spray of saturated sodium chloride (about two ounces in a small compartment of 550 cubic feet). The patient should breathe through the nose and with the mouth closed, and the sittings should commence with two minutes, and be gradually increased to twenty to thirty minutes. One or two, and exceptionally three or four sittings, will be required daily.

In laryngeal and mild cases the chlorine water (U.S.P.), mixed with a saturated solution of salt ($\frac{1}{2}$ – $\frac{3}{4}$), should be vaporized in from 5ss.—5ii. at a sitting. In laryngeal phthisis even weaker solutions and more frequent sittings may be used with a face inhaler. These chlorine inhalations are said to prevent further caseation, and it is irrespirable unless diffused in vapour of chloride of sodium. Hypodermic injections are also made in the gluteal region, beginning with iodine, $\frac{1}{12}$ grain daily, gradually increasing until $\frac{1}{2}$ –1 grain is reached, then the gold and sodium may be injected daily beginning with $\frac{1}{30}$ – $\frac{1}{10}$ grain, and gradually increasing to $\frac{1}{2}$ – $\frac{1}{3}$ grain, and if the medication is to be continued this should be reduced to $\frac{1}{10}$ grain daily. It will be better to alternate the gold and iodine injections daily. The iodine must be discontinued if albumen appears in the urine. At first, loss of weight and increase of temperature, with excessive sweating, occur. The expectoration soon lessens and becomes watery. Asthma and anorexia may supervene, diarrhoea and dryness of the throat, and listlessness and quickening of the pulse, when the patient is saturated. Then follows tonic reaction with disappearance of the symptoms, except anorexia. Vertigo and nausea may sometimes appear with large doses of the gold. Most patients do better on small doses. One constant feature in cases showing rapid improvement is the supervention of asthmatic symptoms. After two or three weeks these chemicals ought to be used alternately every day or other day; finally once or twice a week. Iodine cannot be used alone for any length of time, but the gold and sodium can.

This is the method of application of twenty-seven cases of which complete details are given. A marked retrogression of the physical signs in the chest appears to be the rule, with a diminution or absolute disappearance of the tubercle bacilli from the sputum, and a return to comparative health of the patient. To take one case, a patient with harassing cough, chest pains, debility, night sweating, and the following physical signs, "dulness over the whole of the left side, bronchial respiration, bronchophony over upper right front and back, with a small cavity in the lower portion of the left infra-clavicular region, showing cavernous respiration with gargling râles and tubercle bacilli in his sputum, right side appeared emphysematous and the percussion resonance high pitched over the right back, with moist crackling in the right and left inter-scapular region," improved finally so as to seem "perfectly well, seldom coughs, and has no expectoration," from which

we are led to infer that the physical signs in the chest had actually cleared up and the process was arrested. When we read, as we constantly do in these recorded cases, that dullness, bronchial respiration, moist crackling, &c., have entirely or almost completely disappeared under these injections, we are forced to the conclusion that the treatment is as good, and presents as great possibilities at least, as the tuberculin treatment. We also find that the laryngeal signs of tuberculosis of that organ disappear more or less completely. If we do not meet with the expression "cured" in the authors' reports, we must attribute this caution to the authors' modesty. At the same time we must always guard against "improvements," for we know full well that under every new system, and with every new drug, it is common to find "improvement" in the condition of the patients. But it is hard to explain the retrocession of well-marked physical signs so constantly without coming to the conclusion that the injections and inhalations must exercise some obscure but favourable influence upon the local process. The authors do not append any conclusions to make any review of their work, in the report as published by them, but leave their cases to the judgment of the reader; and taking the report as it stands, there certainly seems to be something favourable to be said for it, and at least as much as can be said for any other "system" of treatment yet devised for the "cure" of consumption. Being apparently free from the risks that attend the tuberculin experiments, it seems to us that the treatment may safely be recommended for trial. It must never be forgotten that so long as the patient's general condition keeps favourable, or improves, we may always look for cases of "cure" of laryngeal tuberculosis in a certain small proportion of cases under any treatment, or even without special treatment at all.

EMIL BEHNKE ON STAMMERING.

ERRATUM AND ADDENDUM.

In our last month's issue we gave a critical account of Mr. Behnke's lecture on this subject. We regret the occurrence of a clerical error of considerable importance. On line 16 of page 259 the word *inspiration* should have been *expiration*.

We may add that at the conclusion of the lecture a casual patient, afflicted with stammering of a most pronounced type, was brought forward by one of the medical officers, and Mr. Behnke demonstrated on him his method of procedure. This was so effectual that the patient was able, after a few minutes' training, to repeat several verses, phrase by phrase, to Mr. Behnke's dictation.

THERAPEUTICS, DIPHTHERIA, &c.

Freudenthal (New York).—*Illumination in Laryngology*. "Medecin. Monats.," 1889, No. 11.

THE method gives practical results, especially in the diseases of the antrum of Highmore. *Michael.*

Cousins, J. Ward (Portsmouth).—*New Nasal Clamp Forceps*. "Brit. Med. Journ.," May 9, 1891. S.E. Hants Dist., Brit. Med. Assoc., April 9, 1891.

DR. COUSINS exhibited this instrument, and demonstrated its value in severe cases of nasal polypi, and in obstruction of the meatus from chronic thickening and osseous changes. *Hunter Mackenzie.*

Holzinger.—*Scarlatinal Diphtheria: Inaugural Dissertation*. München.

SCARLATINAL diphtheria is a combination of the scarlatinal infection with the infection of true diphtheria. *Michael.*

Schemm.—*Degeneration of the Muscles of the Heart in Diphtheria*. "Virchow's Archiv.," 1890, p. 235.

IN thirteen cases examined by the author, he found myocarditis parenchymatosa seu degenerativa, a pathological state that is found in many infectious diseases. The degenerations were the greater where the duration of the disease was longer. *Michael.*

Rause (Cölln.-a-E.).—*The Different Methods of Diphtheritic Infections and their Causes*. "Correspl. der Schweiz Aerzte," 1890, No. 57.

THE author tries to prove that diphtheria is not produced by a contagium, but by a miasma. He found that propagation in a family is relatively rare, that those people who work in the earth have a high degree of mortality, and that there is a relation between epidemics and the amount of terrestrial water. *Michael.*

Babes (Bukarest).—*Researches upon the Diphtheria Bacillus and Experimental Diphtheria*. "Virchow's Archiv.," 1890, p. 460.

THE author produced from the bacillus of Loeffler a toxic substance, with which he could kill animals, and in smaller doses produce a characteristic paralysis of the posterior extremities. Membranes could not be produced by the toxine. By re-vaccination with the membranes, the animals sometimes became resistant, but there was no certain effect, so that no practical use can be recommended. By application of a solution of permanganate of potash 1:1000, sublimate 1:4000, alcohol 1:5, chloral hydrate 1:50, boric acid 1:20, the development of the micro-organisms could be diminished, and these medicaments may therefore be recommended for human diphtheria. *Michael.*

Rause (Cölln.-a-E.).—*The History of the Micro-Organisms of Diphtheria and Scarlet Fever*. Dresden and Leipzig: Pierson, 1889.

THE author describes a micro-organism, *mucor salicinus*, which he

believes is the cause of diphtheria. The micro-organisms brought on to the tonsils produce fibrinous exudation. He has found the bacilli in diphtheritic membranes. *Michael.*

Dose.—*Zur Kenntniss der Gesundheitsverhältnisse des Marschlandes. Angina, Diphtherie, Croup oder primum est medicine nocet.* ("The Sanitary State of Marshland. Angina, Diphtheria, Croup, or primum est medici ne nocet.") Leipzig: Breitkopf & Härtel. 1890.

RECOMMENDATION of an expectative treatment in diphtheria. Diphtheria is rather rare in marshland. *Michael.*

Mayer (Aachen).—*Treatment of Diphtheria.* "Therap. Monats.," 1890, No. 4.

RECOMMENDATION of the treatment with ice internally and externally. *Michael.*

Pulawsky (Warschau).—*Treatment of Diphtheria.* "Berlin Klin. Woch.," 1891, No. 21.

RECOMMENDATION of insufflation of iodoform. The author has applied this medicament in some cases with good results. *Michael.*

Gottfried (Niederrad bei Frankfurt-a-M).—*Intubation in Diphtheria.* "Therap. Monats.," Heft 91, No. 6.

DESCRIPTION of the method, the instruments, the complications, indications and contra-indications, and relation of some cases. The author concludes that in the treatment of diphtheria it possesses no advantage for the practical physician, but believes that the method is applicable, with good results, in case of difficulty of removal of the canula. *Michael.*

Niedzwiedcki, Petr. A. (Serdobsk).—*Lime Water and Salicylic Acid in Diphtheria.* "Saratovsky Sanitarnyi Obzor," No. 11, 1891, p. 354.

Dr. NIEDZWIEDCKI (pronounced Nedzvedtzkee—a Polish name) most emphatically recommends the following mixture :—

℞. Aquæ Calcis ʒj. (*sic.*)
Acidi Salicylici ʒj. (*sic.*)

M.D.S.—To shake well before using. To give a teaspoonful to children under one year of age, a dessertspoonful to those of from one to ten, a tablespoonful to patients above ten. The dose should be repeated hourly, day and night, until improvement becomes manifest, after which the mixture should be given every two, and then every three hours; after a complete disappearance of pseudo-membranes, it should be administered three times daily, for several days.

During the last twelve years, the author resorted to the method in a large number of cases (both in his private and hospital practices) of which only *one* ended lethally. This was the case of an adult man, who succumbed from laryngeal paralysis, with consecutive pneumonia of a mechanical origin (*Schluckpneumonie* of German authors), developing about the end of the second week of the primary disease (after diphtherial deposits had disappeared, and the temperature become normal). As a rule, all graver symptoms vanish on the second or third day of the treat-

ment ; in a small minority of cases, on the fourth or fifth. The throat becomes clean within a week. The advantages of the method (besides its astonishing efficaciousness) are said to consist in its being extremely simple and easily applicable, even in rural practice. It is absolutely necessary, however, (a) to administer the mixture in the said systematic and persevering manner ; (b) to shake well the bottle on each occasion ; (c) to use the mixture with salicylic acid suspended, and not dissolved. Since chemists are frequently tempted to add borax to the mixture, the prescription should explicitly warn against such addition.

[Considering the verily heroic "salicylization," as recommended by the author, one cannot help expressing a wish to learn from him a word or two concerning the physiological effects of the remedy. Is it possible that his patients could tolerate the treatment without developing intense symptoms of salicylism?—*Reporter.*]

Valerius Idelson.

Beale, Clifford (London).—*Complete Paralysis of Pharynx and Larynx after Diphtheria—Extreme Prostration—Recovery after Subcutaneous Injections of Strychnine.* "Brit. Med. Journ.," May 30, 1891.

THE author remarks on the case: "The chief interest in this case centres round the fact that recovery is possible after the most extreme degree of paralysis after diphtheria. The patient at his worst had all the aspect of a dying man, being absolutely prostrate, unable to move, only breathing by the most shallow respiratory movement, and unable to rid himself of the mucus in his tubes without mechanical inversion. The mode of recovery of the laryngeal movements is especially interesting, as illustrative of the law (*sic*) insisted upon by Dr. Semon and others, that paralysis of the vocal cords affects the movements of abduction before those of adduction, and that recovery takes place in the reverse order." The amount of strychnine administered subcutaneously was 3·5 minims of the liquor strych., B. P. ; this was given every four hours for a day or two.

Hunter Mackenzie.

Melbourne and Victoria Branch, British Medical Association. *Dr. Koch's Fluid.* "Brit. Med. Journ.," May 16, 1891.

Two important resolutions have been adopted by this branch. (1) That the lymph be scheduled as a poison ; and (2) that all cases treated be under the joint care of at least two medical men. *Hunter Mackenzie.*

Cheyne, W. Watson (London).—*Abstract of an Address on the Value of Tuberculin in the Treatment of Surgical Tuberculosis.* "Brit. Med. Journ.," May 2, 1891. Royal Med. and Chir. Soc., April 28, 1891.

THIS contribution is of great interest, embracing as it does a tabular list of all the cases treated by the author, with results. Its perusal and study are recommended to all interested in the subject.

Whilst the subject is approached from the point of view of the general surgeon, certain views are advanced which are of special interest.

In tuberculous glands it is stated to hardly repay the trouble and inconvenience, except in so far as it might reduce the peri-adenitis, and thus pave the way for operative measures. In tuberculous laryngitis the author believes it to be of use in certain cases ; but how the selection is

to be made, the author does not say. He thinks the dangers of tuberculin in phthisis are being unduly magnified, and its benefits unduly decried. Some of the imperfect results were doubtless due to timidity in the application of the remedy.

An important discussion followed.

Hunter Mackenzie.

Williams, C. Theodore (London).—*Treatment of Phthisis by Koch's Method.* "Lancet," June 27, 1891.

FROM observations on fourteen cases in various stages Dr. Williams arrived at the following conclusions :—(1) That there is no doubt as to the penetrative action of tuberculin, and that possibly, if something were combined with it, its remarkable power of selecting tubercle might be turned to account ; (2) its effect, as it at presents stands, is to convert tuberculous masses which may be quite quiescent into cavities, and the process is not always safe, though in rare cases desirable ; (3) as regards the condition of the patients they fare worse than the ordinary run of similar consumptives, and, moreover, that some of them improve considerably when transferred from Koch's system to the ordinary treatment of the hospital. [The conclusions appear to be extremely fair deductions from the collection of cases described in the original lecture.]

Dundas Grant.

Stewart, D. D. (New York).—*Propositions suggested by the failure of Mercury and Potassium Iodide to cure a case of Nerve-Syphilis subsequently cured by Mercury alone.* "Med. News," April 11, 1891.

A PATIENT with a nerve-affection accompanied by appearances indicating a hitherto unsuspected and untreated syphilitic dyscrasia, placed upon potassium iodide (twenty grains) and mercuric chloride (one-twentieth of a grain) thrice daily, underwent absolutely no improvement. It was then determined to administer mercury alone, as it was not unlikely that the full doses of iodide of potassium were eliminating the mercuric iodide before it could exert any effect. He was then given mercuric iodide (one-third of a grain) with a little opium and belladonna. Great improvement speedily ensued.

The writer suggests that the two drugs should not be given at the same time, or that the mercury should be given in larger doses than the usual one, that in cases of suspected syphilis the failure of potassium iodide should not be considered a conclusive negative. [Though these remarks refer to cases of nervous disease, they are worthy of application in our special department.—*Reporter.*]

Dundas Grant.

White, Hale W. (London).—*Treatment of Syphilis by the Subcutaneous Injection of Perchloride of Mercury.* "Lancet," June 6, 1891.

RECOMMENDED for its ease and its rapidity of action, if used according to Macall Anderson's method as follows :—The needle of the syringe is thrust deeply into the muscles at the upper and outer part of the gluteal region. One-eighth of a grain of hydrochloride of morphia is injected. The syringe is then detached from the needle, which is left *in situ*, and an eighth of a grain of perchloride of mercury is then injected. The injection used in this way is not very painful and is not likely to produce

painful swelling of any consequence. It should be done every evening, and stopped for some days on the first sign of salivation. Cases of nerve syphilis benefited by the treatment are narrated. *Dundas Grant.*

Nicholson, Frank (Hull).—*The Complications and Sequelæ of Influenza*. "Brit. Med. Journ.," June 13, 1891. E. York Branch, Brit. Med. Assoc., Annual Meeting.

TONSILLITIS without suppuration was a common complication, as was also a mild form of laryngitis. Epistaxis was fairly frequent and unimportant, though occasionally it was severe and alarming. Post-nasal catarrh sometimes caused much discomfort, and ozæna (*sic*) was rare. [As the author affirms that recovery was the rule in the case of the last-mentioned disease (ozæna), we must assume that what is here indicated by that term is merely a form of simple nasal catarrh.—*Abstractor.*]

Hunter Mackenzie.

Caiger, Foord F. (London).—*On Throat and Nose Complications in Scarlet Fever*. "Lancet," June 6, 1891.

IN an analysis of 1008 cases of scarlet fever, Dr. Caiger narrates complications in connection with the throat and nose in a large number. A primary pyrexial adenitis of late development, apart from the glandular enlargement accompanying the ordinary faucial inflammation, occurred in sixty-nine cases, of which seventeen suppurated. Rhinitis with a more or less purulent discharge occurred in fifty-eight, frequently associated with otorrhœa and commonly in young children. Ulcerative stomatitis was observed in twenty-seven cases, three took on the characters of "noma," requiring treatment with fuming nitric acid. Secondary tonsillitis, sufficient to cause a rise of temperature, took place in twelve cases, all of which made a rapid recovery. In no instance did diphtheria, faucial or laryngeal, make its appearance among the scarlatina convalescents, and the writer believes that with good hygienic conditions (soil, heating, drying of air, &c.) and avoidance of contagion from cases of diphtheria it should not occur. As regards treatment, in those with severe throat and glandular affections he advises syringing out the fauces and nares with a solution of chlorine or boracic acid and applying hot poultices.

Dundas Grant.

NOSE AND NASO-PHARYNX, &c.

Roe, J. O.—*The Aseptic Method as applied to Intra-Nasal Surgery*. "Medical News," March 28, 1891.

THE author is convinced of the disadvantage and dangers of the "open method" of post-operative treatment, *e.g.*, hæmorrhage, infection, erysipelas, and the "necessity" of using antiseptic sprays and washes. Closed dressings, *e.g.*, medicated wool or gauze, do not exclude germs contained in the acrid nasal secretions, and also act as irritative foreign

bodies. Dr. Roe's method is as follows:—Before operating, the nasal cavity is thoroughly cleansed with a warm alkaline antiseptic solution (salt, boric acid, and bichloride of mercury, 1:4000). All instruments are cleansed and sterilized. Sterilized cocaine is thoroughly applied by spray or cotton wad. After operation the wound is cleansed by irrigating with hot sodium chloride and bichloride of mercury (1:4000), thoroughly dried, and covered well with iodoform powder. The nose is then carefully and thoroughly filled with an antiseptic dressing so as "to hermetically seal the cut surfaces against bacterial invasion." This is done with plugs consisting of thin metallic plates evenly covered with antiseptically prepared Angora wool or bichloride cotton, and which before introducing are dipped into a solution of bichloride of mercury (1:3000). The plugs should be of such a size and shape that when wound with cotton and inserted into the nostril they completely cover the wounded surface. The plug should also exert an equable and firm pressure on the whole of the wounded surface. Any metal may be used for the plugs; tin and copper in thin sheets, being the most flexible, are also the best. When inserted the plugs should cause no discomfort to the patient. If the operation involve both the upper and lower portions of a nostril, one plug wide enough to cover the whole surface cannot be introduced. Two or more plugs are then necessary. When the plugs are removed the nostril should be irrigated and dusted as before, and fresh plugs be introduced. These latter need not be so tight as before. The second plugs may be allowed to remain in until the wound is sufficiently healed to require cleansing only, which should be done two or three times daily with an antiseptic wash or spray. If both nostrils require operation, let one heal before the other is touched.

The advantages claimed for this method are :—

1. That it prevents hæmorrhages, not more than slight oozing being possible.
2. All purulent formation is prevented, and septic infection cannot take place.
3. It enables an operator to complete at one sitting all that may require to be done, without any subsequent disturbance.
4. The inconvenience of frequently cleansing the nose after operation is avoided, as the dressing may be allowed to remain four to six days.
5. The wound heals quickly, readily, and smoothly, and as granulations are not permitted to spring up, adhesions between neighbouring parts are prevented.
6. It is preferable in epistaxis to plugging the posterior nares.
7. This dressing holds the parts in place after fractures or operations for deviated septum better than any other, and union of fractured parts is not interfered with, as is the case with metallic clamps, hard rubber plugs, &c.

[The author concludes that the disease germs of the nasal secretions on the rapidly absorbent surfaces of the nasal passages render it inexcusable to treat a wounded surface in the nose by the open method, a conclusion which we cannot but think fanciful. Many of the dangers which this rather cumbersome dressing is designed to overcome are also

rather imaginary than real. But if "antisepsis" leads to greater habitual cleanliness in the use of instruments something real is gained.]

R. Norris Wolfenden.

Phillips, W. C.—*Notes on Aristol in the Treatment of the Diseases of the Nose and Throat.* "New York Med. Journ.," May 23, 1891.

ARISTOL, or iodide of thymol, is a combination of iodine and thymol, a fine yellow-red powder, inodorous, non-toxic, insoluble in glycerine, and slightly so in alcohol, but very soluble in ether, chloroform, and fatty oils. It is decomposed by heat and light; after decomposition its odour is similar to iodoform. It has been used in ozæna, atrophic rhinitis, otitis media, ulcerating epithelioma of the face (which was said to cicatrize rapidly under it!), in tuberculous ulcers (causing them also to cicatrize), and in various skin affections.

The author has employed it in several cases of atrophic rhinitis with ozæna ulcerations of the septum, specific and non-specific, and in ozæna. In the first two conditions the effect was very favourable, but not so good in simple ozæna.

The aristol may be insufflated, but its expense is against this.

The author has had solutions made for spraying in liquid petroleum products. By making a solution first with pure almond oil, benzoinol may be added, and a solution of 38 grains to the ounce can be obtained. Up to 5iii. to the ounce can be made in benzoinol.

In liquid petroleum the author has solutions of 30 grains to the ounce.

Fœtor seems to be corrected by the use of aristol, and copious secretion is excited, which is the chief factor in the loosening of the crusts which occur under this treatment.

R. Norris Wolfenden.

Daly, W. H. (Pittsburg). *An Effectual and Easy Method of Plugging for Epistaxis.* "Brit. Med. Journ.," May 23, 1891.

THE method recommended is by means of cotton wool, so arranged as to form a cone, and inserted in the nose by means of a probe or knitting needle. The *modus operandi* is fully detailed. *Hunter Mackenzie.*

Macdonald, Greville (London).—*On Cyst and Abscess of the Middle Turbinate Bone.* "Lancet," June 20, 1891.

IN the position of the middle turbinated body there is found in a few of the cases of nasal obstruction, with the usual symptoms thereof, a rounded body varying in size from that of a filbert to such as would probably contain half an ounce of fluid, formed by a cyst or abscess of that body. Dr. Macdonald explains their formation by an enlargement due to osteophytic periostitis leading to an incurvation of the free margin and union of the same to the body of the bone, whereby a closed cavity is formed, lined with mucous membrane covered with columnar epithelium. The secretion of mucus in the interior leads to distension. The treatment recommended is to throw a strong snare round the mass and remove as much as possible with it, then to pick away the remainder with forceps. When this is impracticable it is advised to make an opening into the cyst and tear away the walls piecemeal.

Abscesses of the middle turbinated body probably originate in cysts.

They are accompanied by a purulent discharge and sometimes by empyema of the antrum. [In the last number of this Journal there is an abstract of a paper by Zurllinger on *Cysto-pneumatic Degeneration of the Nasal Middle Turbinated Bodies*—"Wiener Klin. Woch.," 1891, No. 19. He recommends transillumination as an aid in diagnosis.]

Dundas Grant.

Horsley, Reginald (Edinburgh).—*Cyst of the Inferior Turbinated Body.* "Edinburgh Med. Journ.," Jan., 1890.

THE case, which is described at length, is rare, and of exceptional interest, similar conditions having seldom been described. Severe reflex nasal asthma existed in connection with the cyst, which was situated on the posterior extremity of the inferior turbinated body. During digital examination the cyst was ruptured, and the patient immediately relieved of both the nasal obstruction and the asthma.

Hunter Mackenzie.

Phillips, D.—*The Treatment of Atrophic Rhinitis (Dry Catarrh) with Ichthyol.* "New York Med. Journ.," May 16, 1891.

THE nose is to be sprayed with alkaline solution and cleaned by a cotton wad. It is then dried and 5 per cent. keroline-ichthyol solution applied on a cotton-wrapped applicator. An oily spray is not advisable; it softens the secretions, but the oil prevents the ichthyol from coming into contact with the surface. Cleansing with alkaline solution is used twice daily; then a spray of keroline-ichthyol (ichthyol 5 per cent. dissolved in keroline) in from three to five parts of liquid albolene, with or without a little menthol or eucalyptol to disguise the fishy smell, is applied to the parts. Serous discharge after spraying lasts half-an-hour. Cod liver oil, Fellows' hypophosphites, &c., are also given, and parts necrosed or causing pressure removed. The author claims very good results from this treatment.

R. Norris Wolfenden.

Üspensky, M. V. (Moscow).—*Two Cases of Hypertrophic Rhinitis cured by Galvano-Cautery.* "Meditsinskiĭ Obozreniĭ," 1891, No. 1, p. 50.

POINTING to Dr. Joal's researches (*vide* the JOURNAL OF LARYNGOLOGY, September, 1890, p. 383), the author adduces two cases from his recent practice which, as he justly thinks, fully confirm Dr. Joal's teachings. The cases referred to professional singers—ladies, aged twenty and twenty-six—who consulted him on account of nasal *timbre* of their singing and speaking voice, difficulty in emitting (and tremor of) high notes, easy fatigue and dyspnoea on singing, etc. In both of the patients hypertrophy of the middle turbinated bodies was found, while the larynx proved to be perfectly normal. Under the influence of galvano-caustic treatment all the symptoms disappeared completely (in one case in three weeks; in the other in two months).

Valerius Idelson.

Körner (Frankfurt-a-M.).—*Untersuchungen über die Wachstumsstörungen und Missgestaltung des Oberkiefers und des Nasengerüsts in folge von Behinderung der Nasenathmung. Mit 3 Tafeln.* Leipzig: C. W. Vogel. 1891. 18 pp. ("Researches on the Disturbances of Development and Malformation of the Upper Jaw and the Osseous Nose caused by impeded Nasal Respiration.")

DESCRIPTION and illustration of the different forms of malformed

palates produced by obstructed nasal respiration, with special relation to the arched palate and abnormal position of the teeth in persons having been rachitic, and at the same time affected with adenoid vegetations or congenital occlusion of the nose. *Michael.*

Stepanow (Moskau).—*On the Presence of the so-called Hyaline Globes in the Tissue of Muroid Polypi of the Nose, &c., and Remarks on the Hyaline Bodies of Rhinoscleroma.* "Monats. für Ohrenheilk.," May, 1891.

HYALINE globes are often found in nasal polypi, adenoid vegetations, &c., and they are also found in rhinoscleromatous tissue. They have no diagnostic value. They are produced by the entrance of bacilli into the tissue. The author believes that the formation of hyaline cells is a process of *vis medicatrix naturæ*, which prevents too great propagation of bacilli. *Michael.*

Shield, Marmaduke.—*An Unusual Case of Nasal Polypus.* "Lancet," July 4, 1891.

A CASE of polypus in the left nostril of a woman of advanced age, which caused obstruction, pain in the left eye, and lacrymation. During examination with a probe it bled freely. After removal with cold wire snare there was much pulsatile hæmorrhage and rapid regrowth. The nose was then opened laterally, and it was found that the disease originated in the antrum. It was therefore decided to remove the whole jaw with the contained malignant growth. The hæmorrhage was very severe, but recovery took place. The writer points out the interest of the case in illustrating how exceedingly insidious and deceptive may be the origin and progress of antral tumour. In view of the danger from hæmorrhage during the operation, he suggests the advisability of placing a temporary ligature on the carotid in cases of vascular tumour of the jaw.

Dundas Grant.

Fraenkel, B. (Berlin).—*Gefrorenerdurchschnitte zur Anatomie der Nasenhöhle. Frozen Sections of the Anatomy of the Nasal Cavity.* Second part. Berlin: Hirschwald, 1891.

THIS second part completes the atlas published by B. Fraenkel. Referring to the first part of the work, we have already mentioned its great value, both as to judicious selection of the sections and artistic reproduction. This second part contains eleven tables, of which the first seven exhibit the five cut tables, superimposed to assist the understanding of the whole. The table Nos. 8-15 shows horizontal sections. Nos. 16 and 17, the most instructive for the practitioner, show sagittal sections of the head, illustrating the septum, the frontal and sphenoidal sinuses, the nasal and naso-pharyngeal cavities. *Michael.*

Uchermann (Christiania).—*A Case of Naso-Pharyngeal Growth.* "Report of Christiania Med. Soc.," May 28, 1890.

UCHERMANN demonstrated in the Christiania Medical Society a man, aged twenty-six, from whom he had removed a large naso-pharyngeal growth (fibroma), which had sent prolongations into both nasal cavities, by means of the galvano-caustic knife, in several *séances*, altogether lasting six weeks. *Holger Mygind.*

Berg, John (Stockholm).—*Contribution to the Knowledge of Diseases of the Accessory Cavities of the Nose, and to the Theory of the Discharge of the Cerebro-Spinal Liquid through the Nose.* "Nordiskt Med. Arkiv.," vol. 21, No. 3.

THE author first relates a case where he extirpated thirteen osteomatous growths from the frontal sinus with success. The patient, a man aged thirty-seven, had occasionally had abundant discharge of a clear fluid from the nose, which always had relieved the headache he frequently suffered from. In a case of a lady, aged twenty-five, who during ten years had suffered from progressive loss of sight (owing to atrophy of the optic nerves), and violent headaches, and where there was some protrusion of the eyes, and lately also loss of the sense of smell, the author suspected a hydrops of the sphenoid sinus, removed the right eye-ball (there only being perception of light on both eyes), and trephined this cavity through the internal wall of the orbit. A yellowish fluid appeared, showing pulsation, and the patient felt greatly relieved during the following months, while an abundant fluid was discharged through the drainage tube. The pains returning, the author dilated the wound, explored the cavity with a finger, but did not find any growth as expected. Since then the patient has been well (except for the blindness). The author next gives a synopsis of the literature on abundant watery discharges from the nose, and discusses thoroughly the different theories, adhering to the opinion that it is caused by exudation from or rupture of enlarged lymphatic communications between the sub-arachnoid space and the mucous membrane of the nose.

Holger Mygind.

Robertson, William (Newcastle-on-Tyne).—*Eustachian Synechia.* "Brit. Med. Journ.," May 2, 1891.

THE condition to which this term applies is stated to be "an anchoring of the margins of the ostium tubæ by adhesions resulting from the (previous) existence of enlarged pharynx tonsil." Lateral granular pharyngitis may also lead to the same result—a stretching of the ostium in various ways. Removal by the finger nail is recommended.

Hunter Mackenzie.

Ziem (Danzig).—*Illumination or Irrigation of the Antrum of Highmore and Frontal Sinus.* "Berliner Klin. Woch.," 1891, No. 27.

POLEMICAL article.

Michael.

Schültén, M. W. (Finland).—*Empyema Antri Highmori.* "Finski Läkare-sällskapets Handlingar," 1890, No. 6, p. 373.

CONTAINS a report of five cases of empyema of the antrum of Highmore, of which cases four undoubtedly were the consequence of dental periostitis. Schültén opened the cavity in all cases from the alveolus.

Holger Mygind.

Frykman, T. G. (Sweden).—*Hydrops Sinus Frontalis Purulenta.* "Hygeia," July, 1890, p. 494.

A CASE where the pus of the frontal sinus, after several years' symptoms of affection of the sinus, obtained a spontaneous outlet through the left

eye-lid. A large opening to the nasal cavity was produced through an operation, and the fistula began to discontinue discharging pus.

Holger Mygind.

Nitsche (Salzbrunn).—*A Case of Bilateral Rhinoliths.* "Monats. für Ohrenheilk.," July, 1891.

A LADY had suffered from her youth with a copious purulent and sometimes sanguinolent discharge from the nose, and occasional frontal pain. In the left nostril there was only to be seen a small greenish-yellow spot between the middle turbinal and the septum, like a little dried pus. The introduction of a sound revealed the presence of a hard body, bulbous posteriorly, and of which very little could be seen from the front. On removal it was found to be a rhinolith, the nucleus of which was a cherry stone. A similar appearance in the right nostril was due to an identical body, also a rhinolith, built up on a cherry-stone. The chief interest in the case, apart from the bilaterality, is the slightness of the rhinoscopic appearances.

Dundas Grant.

MOUTH, PHARYNX, &c.

Munro (Providence).—*A supposed Sarcoma of the Upper Jaw that proved to be an Enchondroma—Removal—Recovery.* "New York Med. Journ.," May 23, 1891.

THE patient was a woman of seventy-six. Six years ago her last remaining tooth (left upper canine) was extracted. It had a large bunch on one side, and weighed half an ounce. For long it had been ulcerated and painful. About this time a hard, incompressible swelling a little below and to the inner side of the left malar eminence was noted. It gradually increased for three years, and a similar swelling appeared on the opposite side, crossing the hard palate. Four years ago a black sloughing spot appeared in the mouth near the centre of the growth. It soon became an ulcer, with a very fœtid discharge. There was but little pain. Operation was considered inadvisable. The discharge from the mouth ceased, and continued free for a year, the tumour greatly shrinking in size. Meanwhile another growth began on the right side just below the malar eminence, and two years ago greatly increased in size. That part in the left nostril was soft and indistinctly fluctuating. The rest was hard. There was no pain. Dr. Munro operated, removing four and a half ounces (by weight) of dull, white, hard, brittle cartilaginous-looking material. Microscopically, it proved to be chondroma calcifying in places. Three months after operation she is without return, and very well.

R. Norris Wolfenden.

Beutzen, G. E.—*Some Remarks upon the Examination of the Mouth and the Throat.* "Norsk Magazin for Lægevidenskaben," 1890, S. 23.

RECOMMENDS to examine always the posterior surface of the tonsils when these are enlarged, by pressing the handle of a spoon or something

similar against the anterior pillar, producing in this way a rotation of the tonsil round its axis.

Holger Mygind.

Barling, Gilbert (Birmingham).—*Lupus of the Mouth, Pharynx and Larynx.* "Lancet," June 27, 1891.

OUT of thirteen unselected cases of lupus, the large proportion of six had the affection on either palate, pharynx or larynx. Of the thirteen six were females and seven males; five of the females, but only one male, had lupus of the oral and adjacent cavities. In all the cases injection of tuberculin had quite as pronounced an effect on lupus of the palate, pharynx and larynx as it had on the lupus of the skin. The writer considers that "the remedial value of the injection appears to be as considerable in the mucous surfaces as on the skin."

Dundas Grant.

Wharton.—*Ranula.* "Philadelphia Med. News," May 2, 1891.

IN the course of a clinical lecture at the Children's Hospital, Dr. Wharton recommended excision of a portion of the wall of the ranula with scissors as the best treatment. The amount removed should be considerable, and if the ranula extend to the opposite side should include a section from this side. The fluid contents are to be squeezed out, and the inside of the sac touched with nitrate of silver or tincture of iodine. The only after-treatment is to keep the mouth clean with a wash of chlorate of potash, glycerine and myrrh, or of boric acid, carbolic acid, glycerine and water. Cure of the condition generally follows. *R. Norris Wolfenden.*

Rydygier (Krakau).—*Rare Diseases of the Tongue.* "Congress der Deutschen Gesellschaft für Chirurgie," Meeting, April 1-4, 1891.

THE author showed a case of black tongue, observed in a girl fourteen years of age. The black part occupied the middle portion of the tongue. The microscopical examination showed hypertrophy of the papillæ filiformis. He also showed a lipoma extirpated from the tongue.

Michael.

Milner, E. A. (Herts).—*A Singular Case of Self-Mutilation.* "Brit. Med. Journ.," June 6, 1891.

AN epileptic imbecile was found bleeding from the mouth, and with his fingers down his throat. He said he had been seized with "lock-jaw," and to remedy this, he passed his fingers down his throat, and pulled forcibly. It was found that he had torn the soft palate almost completely away from its attachment to the fauces on the left side. This healed rapidly, without untoward symptoms, and without at any time causing dysphagia or dyspnoea, or nasal regurgitation of fluids.

Hunter Mackenzie.

Nicholls, F. L. (Fulbourn).—*Inflammation and Suppuration of Soft Palate with Heart Failure.* "Brit. Med. Journ.," May 30, 1891.

THE author describes the case of a man, aged sixty-one, who had previously suffered from bronchial catarrh, and in whom inflammation and marked swelling of the soft palate developed. This seemed subsequently to discharge, and considerable relief in breathing and swallowing

ensued. The patient died in a few days from heart failure. [We have been unable to see any connection between the condition of the heart and that of the soft palate.—*Abstractor.*] *Hunter Mackenzie.*

Fleischer, Professor Adolf K. (Kiev).—*Necrosis of the Hard Palate and Nasal Septum as a Sequel of Typhus Fever.* "Vratch," 1891, No. 24, p. 580.

THE author relates an exceedingly rare case of a coachman, in whom on the fourth day after crisis there quite suddenly appeared difficult swallowing, thick speech with a nasal twang, and foul taste. Examination revealed a red-edged perforation, situated about the middle of the hard palate, and measuring three by two centimètres. A similar, but somewhat smaller, hole was also found in the nasal septum. On the previous day there had been present only blackened areas, with congested zones. The course of typhus fever otherwise did not show any deviations from the standard. *Valerius Idelson.*

Harris, T. (Manchester).—*A Case of Tuberculosis of the Palate, Larynx, and Lungs treated with Injections of Tuberculin.* "Manchester Med. Chronicle," June, 1891.

THE patient was a man, aged fifty-one, and the disease was progressing rapidly, especially in the throat. Considerable doses of tuberculin were given without causing any reaction, even in doses of 0.013 gramme given after a six days' interval. There was no evidence of any local reaction after injection round the palatal ulceration. The epiglottis sloughed, but from the progress of the disease, and not as a result of the injections. Not only did the tuberculin produce no reaction, but it did not prevent the extension of the old tubercular foci, and the development of new ones. At the autopsy many very recent tubercles were found, and many had developed during the time the injections were being made.

R. Norris Wolfenden.

Collins, F. H. (Manchester).—*Acute Pharyngitis.* "Brit. Med. Journ.," May 9, 1891. Manchester Clin. Soc., April 21, 1891.

A CASE was described, due to exposure to a cold wind, in a previously healthy woman, aged thirty, and followed by laryngitis and œdema glottidis. A fatal result ensued, with hepatization of both lungs. The physical signs indicated a septic poison, and the disease might be described as erysipelas of the pharynx, extending down the bronchial tract.

Hunter Mackenzie.

Sendtner (München).—*Etiology of Angina Follicularis.* "Münchener Med. Woch.," 1891, No. 26.

IN the secretion of the tonsils of five cases of follicular angina the author always found great masses of streptococcus pyogenes aureus. *Michael.*

Holsti (Finland).—*Three Cases of Angina with Erythematous Rash of the Skin.* "Finska Laekaresaellskapets Handlingar," October, 1891, p. 671.

SHORT description of three cases, all females, aged twenty-five, thirty, and thirty-three, where an erythematous rash of the skin appeared simultaneously with, or shortly after, an angina with intense redness of

the fauces, and in one case greyish false membranes of the tonsils, and in another case small hæmorrhagic effusions of the mucous membrane of the throat. In two of the cases the rash appeared with certainty, first on the neck and the upper part of the chest; in all cases it spread by degrees rather extensively.

Holger Mygind.

Silfverskiöld, P. (Gothenburg).—*On Tonsillary Angina in Children under Two Years of Age.* "Eira," 1891, No. 6.

THE author has observed this disease in 17·9 per cent. of acute internal diseases in children under two years of age, and in 27·6 per cent. of cases (epidemic diseases in both groups not included) amongst children nine to seventeen years of age. He considers, however, the first figure too low, as many cases occur unobserved, or are not treated under the right diagnosis, as the symptoms frequently do not point to the throat being the organ attacked. The symptoms are generally the following: Uneasiness, restlessness, peevishness, thirst (but the child takes liquid nourishment in small portions); the child frequently puts its fingers into its mouth; cough, with formation of phlegm in the throat; hoarseness, sometimes to a considerable extent; frequently vomiting and diarrhœa; coryza is present in many cases; the breathing quick and loud. The examination of the throat shows the tonsils, the velum, and the pillars swollen, and bright red. Only a few times the author has observed lacunary angina, and never any case of phlegmonous angina. The disease is frequently complicated with otitis media; sometimes convulsions and stomatitis occur as complications. The author has never observed retro-pharyngeal abscesses as a consequence of the disease. The retro-maxillary glands are frequently swollen and tender.

Holger Mygind.

Gerhardt (Berlin).—*Diagnosis of Fistulæ between the Œsophagus and the Trachea.* "Charitéannalen," 1890, pp. 156.

IF a probe is introduced in a healthy person just to the bifurcation, and the probe is continued with a rubber drainage tube introduced into water, we remark the discharge of some air when the patient compresses. A continued pressure has no effect. If there is a fistula between the œsophagus and the trachea and the patient compresses there is a continuous air stream combined with rhonchi.

Michael.

Dawson, Stanhope (Cockermouth).—*Partial Asphyxia from Impaction of False Teeth in the Œsophagus during an Epileptic Fit—Recovery.* "Lancet," July 4, 1891.

AFTER the removal of the impacted teeth an accumulation of tenacious phlegm threatened asphyxia. This was removed by means of strong hen feathers. The writer suggests the advisability of always having some such feathers at hand or, better still, some brushes such as are used for drying out the flute.

Dundas Grant.

Johnson Wyatt.—*Multiple Epithelioma of the Œsophagus and Stomach.* Transactions of the Montreal Medico-Chir. Soc., May, 1891.

THE patient was seen by the reviewer during life, but was in too weak a condition to admit of a minute examination. The posterior pharyngeal

wall was occupied by a prominent growth, which extended downwards into the œsophagus. Swallowing was at the time impossible. At the autopsy, within a few days of his admission into hospital, two epitheliomata were found high up in the œsophagus, whilst within the stomach, close to the œsophageal opening, was another tumour. The liver contained two large tumours and two smaller ones; the larger ones were broken down in the centre. They differed microscopically from those found in the œsophagus and stomach, in that the cells were arranged in alveoli, and not in nests. It was difficult to say which was the primary tumour. There are but few cases reported.

George W. Major.

LARYNX, &c.

Holmes. — *Case of Acute Local Œdema complicated with Purpura and Salivation.* "Boston Med. and Surg. Journ.," May 14, 1891.

THE author reports a curious case. A man, previously in excellent health, was suddenly attacked with painless and dark-red swelling of the left great toe, the left foot and ankle being swollen thirty-six hours after, and this lasted for five days.

Seven days after this swelling had completely subsided, but there was then a sharply circumscribed swelling over the middle of the right ulna, and the left forearm was swollen to the elbow. The swellings were of the colour of normal skin, painless and pitting on pressure. Next day both hands and the right arm were swollen, and there were many purpuric spots on the flexor sides of both elbows. Similar spots appeared on the lower extremities. There was never any hæmaturia or hæmoptysis. The arms being bandaged, the swelling disappeared in two days, and from the hand in three days.

Alkaline treatment had no effect on the disease.

Profuse salivation (more than a quart daily) then occurred, the soft palate and uvula being swollen to three or four times their natural size, and they, together with the posterior pharyngeal wall, being of dusky red colour. One-sixtieth of a grain of atropine stopped the salivation in an hour, and it did not recur. In two days the throat was well, and the swelling disappeared from the arms, but there were on each side of the abdomen considerably swollen patches extending well into the subcutaneous tissues. The eyelids then became greatly swollen, then the scalp and forehead, followed by swellings of the back, from the hips to the scapulæ. The swellings then all disappeared, the purpuric spots faded, and the patient, apart from weakness, was well. There never was any itching during the progress of the disease.

The nature of these attacks has been considered to bear some resemblance to urticaria, or to be associated with rheumatism. This patient never had rheumatism. The patient's illness lasted altogether for three weeks.

R. Norris Wolfenden.

Mumford. — *Angio-Neurotic Edema.* "Boston Med. and Surg. Journ.," March 5, 1891.

A YOUNG man of twenty, a "bleeder," who had four years previously had purpura and alarming epistaxis, was attacked with sudden swelling of the right cheek, beginning in the buccal cavity near the lower molars. There was general prostration, but no pain, and occasional slight oozing of blood into the mouth. Temperature was 103°; pulse, 104, and feeble; respiration, 18, and laboured. One-half the lower lip was much swollen, purple and hæmorrhagic. There was no œdema of the glottis, but stertorous breathing due to dislocation of the larynx from pressure. The swelling, after having steadily increased till it extended nearly to the clavicle, and round the chin to the angle of the jaw of the opposite side, became constantly more tense and painful. Cyanosis and laboured breathing increased, and immediate aspiration of the tumour was proposed, but deferred. Three hours later the tumour had perceptibly diminished in size, part of the contents of clotted and liquid blood having been discharged through a spontaneous opening into the mouth. Rapid convalescence followed; large amounts of blood, serum, and clots were constantly discharged into the mouth, but in two weeks afterwards there was no sign of the tumour remaining.

R. Norris Wolfenden.

Hajek (Wien). — *Anatomical Researches on Laryngeal Edema.* "Langenbeck's Archiv.," Bd. 42, Heft 1.

A VERY important and interesting experimental treatise on the origin of the different forms of laryngeal œdema, illustrated by good woodcuts. It is not possible to abstract all the interesting details, and it must be read in the original.

Michael.

Auton (Prag). — *Congenital Ligaments between the Sides of the Epiglottis and the Santorinian Cartilages.* "Prager Med. Woch.," 1891, No. 27.

DESCRIPTION and illustration of this rare malformation.

Michael.

Sandford, — (Nottingham). — *Larynx with Sub-glottic Abscess.* "Brit. Med. Journ.," May 16, 1891. Nottingham Med. Chir. Soc., May 6, 1891.

EXHIBITION of specimen.

Hunter Mackenzie.

Irsay (Budapesth). — *Idiopathic Laryngeal Abscess.* "Internat. Klin. Rundschau," 1891, No. 27.

THE patient had difficulty of swallowing for some days. The laryngoscope showed swelling of the left arytenoid cartilage and ary-epiglottic ligament. Next day cough occurred, with a discharge of pus from a little opening in the mucous membrane. Cure resulted.

Michael.

Barling. — *Double Abductor Paralysis of the Larynx.* "Brit. Med. Journ.," May 2, 1891. Midland Med. Soc., April 1, 1891.

EXHIBITION of a case of this complaint in a girl, aged twenty. It was apparently a hysterical condition grafted on a slight catarrhal laryngitis. The respirations had been fifty per minute, and a year previously tracheotomy had been performed for very severe nocturnal dyspnoea. Under the administration of faradism and tonics, subsequent recovery had taken place, but the patient had relapsed, and was now nearly as bad

as ever. She was being treated by tonics, faradism to the neck, and occasional intubation, and slow improvement was resulting.

Hunter Mackenzie.

Merton, Charles A. (Bristol).—*Hysterical Laryngeal Dyspnoea*. "Brit. Med. Journ.," May 30, 1891.

A SHORT note of the case of a young woman in whom severe inspiratory dyspnoea, with marked retraction of the chest, was due to spasmodic (hysterical) adduction of the vocal cords. The attack was cut short by the application of galvanism.

Hunter Mackenzie.

Pineles.—*The Degeneration of the Laryngeal Muscles in the Horse following Section of the Nervus Laryngeus: Superior and Inferior*. "Centralbl. für Klin. Med.," 1891, No. 18.

After section of the nervus laryngeus superior in a horse there follows atrophy of all the muscles of the side operated upon. Exner showed that the section of this sensory nerve produces permanent cessation of the movements of that half of the larynx, and declares this phenomenon to result from atrophy by inactivity. The author has examined the muscles of a horse's larynx in which the nervus laryngeus superior has been cut, and also those in which the recurrent has been cut. After section of the recurrent he found the calibre of the muscle fibres diminished, and hypertrophy of the connective tissue. After section of the nervus laryngeus superior he also found thinned fibres, but amongst them others which were swollen; the nuclei were more than normal, and also in the contractile substance were nucleiform bodies. This process resembles the so-called "dystrophia muscularis progressiva." *Michael.*

Strubing.—*Laryngeal Phthisis*. Greifswalder Med. Verein Meeting, June 6, 1891.

THE author showed a case of laryngeal phthisis cured by forty-three injections of tuberculin. The lungs are only slightly improved.

Michael.

Waxham (Chicago).—*Statistics of Intubation*. "Archiv. of Pediatrics," July, 1891.

Under 1		year : 10 cases with 3 recoveries = 30'00 per cent.					
Between	1 and 2 years:	45	"	11	"	= 24'44	"
"	2 "	3 "	55	"	12	"	= 21'81
"	3 "	4 "	58	"	21	"	= 36'20
"	4 "	5 "	71	"	30	"	= 42'25
"	5 "	6 "	34	"	18	"	= 52'91
"	6 "	7 "	21	"	7	"	= 33'33
"	7 "	8 "	22	"	10	"	= 45'45
"	8 "	9 "	9	"	5	"	= 55'55
"	9 "	10 "	6	"	3	"	= 50'00
"	10 "	11 "	5	"	2	"	= 40'00
Aged	12	"	2	"	0	"	= 00'00
"	13	"	1	"	0	"	= 00'00
"	14	"	1	"	0	"	= 00'00
"	20	"	1	"	0	"	= 00'00
"	42	"	1	"	1	"	= 100'00
"	60	"	1	"	0	"	= 00'00
343		123				35'85	

First 100 cases, 27 recoveries, or 27 per cent.

Second 100 " 34 " " 34 "

Third 100 " 42 " " 42 "

Last 43 " 18 " " 41.85 "

[A truly excellent showing.—*Rep.*]

R. Norris Wolfenden.

Semon, Felix, and Shattock (London).—*Anomalous Tumour of the Larynx.*

"*Brit. Med. Journ.,*" May 23, 1891. Path. Soc. of London, May 19, 1891.

EXHIBITION of a growth from the left ary-epiglottic fold of a patient aged forty-four. *In situ*, the tumour appeared of the size of a small mulberry, springing from the left sinus pyriformis, and apparently of the nature of an angioma. After removal, it was found to be a papilloma, completely encased in a shell of partly recent, partly organized blood clot. The unusual features about the case were stated to be (1) situation; (2) occurrence of spontaneous hæmorrhage, which in laryngeal papillomata was unknown; and (3) the formation of a complete blood shell, which entirely concealed the nature of the tumour.

Hunter Mackenzie.

Stewart, Donald (Nottingham).—(1) *Papillomata of the Vocal Cords (two cases).*

Removal—(2) *Syphilitic Ulceration of the Vocal Cords.* (3) *Paralysis of the Left Vocal Cord.* "*Brit. Med. Journ.,*" May 16, 1891. Nottingham Med. Chir. Soc., May 6, 1891.

EXHIBITION of cases, without remarks.

Hunter Mackenzie.

Uchermann.—*Extirpation of a Laryngeal Growth (Papilloma).* "Report of Christiania Med. Soc.," 1889.

THE author removed by means of a snare a papillomatous growth, originating from the epiglottis and the vocal cords, in six *séances*, in a child, aged seven years, who had been aphonic for four years. After the treatment was finished, the voice had got perfectly clear and the mucous membrane of the larynx did not show anything abnormal.

Holger Mygind.

Berg, John (Stockholm).—*Extirpation of the Cervical Portion of the Gullet, the Entire Larynx, the Thyroid Gland, and the Upper Tracheal Rings.* "*Svenska Läkaresällskapets Förhandlingar,*" 1890, p. 159.

THIS operation was performed to remove a cancerous growth of the upper part of the gullet, the growth involving the other organs mentioned in the title, two tracheal rings being removed. The patient, a man aged thirty-seven, was demonstrated ten weeks after the operation, being in good condition. He took nourishment through a wide tube.

Holger Mygind.

Ström (Christiania).—*A Case of Unilateral Extirpation of the Larynx for Cancer of the Right Vocal Cord.* "Report of Christiania Med. Soc.," May 7, 1890.

THE history of the case, which had been previously treated by Dr. Uchermann, who also gave a report of it, was as follows:—Shortly after the symptoms had begun, Uchermann observed a reddish, hard growth, of the size of half a coffee-seed, originating from the right vocal cord, protruding about half a centimetre into the rima glottidis; the vocal cord movable; no swelling of glands. Age of the patient not stated, but

he seems to have been an elderly man. Uchermann removed a large piece by means of a snare, and the microscopical examination showed it, beyond doubt, to be carcinoma. Uchermann proposed a removal of the vocal cord by means of thyrotomy, while some surgeons called in insisted upon a unilateral removal of the larynx, which operation then was performed by Dr. Ström. Speedy recovery. Five months after the operation, when the case was demonstrated, the patient still had to wear a canula, which he, however, did not use during the day-time, while during sleep he experienced a (nervous ?) feeling of choking. *Holger Mygind.*

Revilliod, E. (Geneva).—*Tracheal Polypus consecutive to Tracheotomy for Croup—Second Tracheotomy—Cure.* "Rev. Med. de la Suisse Romande," Mar. 20, 1891.

TRACHEAL polypi after tracheotomy are of two kinds, (1) vegetations which exist while the patient wears the canula, and retard the removal of the tube; (2) polypoid growths which appear after removal of the canula and cicatrization of the wound. The latter may give rise to three very distinct varieties of symptoms. In the simplest and most favourable cases, the pedicle is broken during coughing, and the growth expelled through the larynx; at other times sudden suffocation occurs, and the patient dies before assistance can be obtained; accidents of such considerable gravity may be confined by a new tracheotomy.

The case which the author records was that of an infant of two-and-a-half years, who was brought into the hospital for violent and successive attacks of suffocation. A certain diagnosis of croup could not be obtained. Rapid tracheotomy was performed without anæsthesia. The operation only lasted half a minute, and relief immediately followed. Seven days after, December 4th, 1890, the canula could be removed, the wound cicatrized and the little patient was well. Early in 1891, slight difficulty of breathing on exertion reappeared, with stridor during sleep. The symptoms becoming intensified, a second tracheotomy was performed. The skin was incised under chloroform, but the infant being attacked with sudden cyanosis and difficulty of respiration the operation (which was intended to be slow) was hurriedly completed. With a curette the operator was able to remove a small thinly-pediced granulation growth which arose from the upper extremity of the old wound.

The author concludes (1) with a very strong objection to the use of chloroform in tracheotomy, which always adds very seriously to the anxieties of the operation. It suppresses the explosion of air on entering the trachea which reassures the surgeon, and expels the blood and false membrane from the tube. He has successfully performed one hundred and ten tracheotomies without chloroform; (2) it is not, as is generally said, at the latter part of the operation that the most abundant hæmorrhage occurs. When the incision is median there is little blood in the tissues immediately in front of the trachea, but there is much more in the subcutaneous and muscular tissues.

Köhl has collected twelve such cases. (Rouzier-Joly, cité par Köhl. Thèse de Zurich, 1887). Koch ("Arch. für Klin. Chirurgie," t. xx.) operated a second time at an interval of thirty-one days after removal of the

canula in a child of three-and-a-half years, removing four or five polypi, and had to perform a third tracheotomy two months after for a vesicle as large as a cherry in the trachea. Cure followed.

Voigt ("Jahrb. für Kinderheilk," 1882) performed crico-tracheotomy twice in a child of eighteen months for polypoid granulations.

Waldsberg and Riedel ("Deutsche Zeitsch. für Chir.," t. xv.) operated twice in a child of seven years at six weeks' interval.

Archambault ("France Médicale," 1879) operated four months after the first tracheotomy, and finding no vegetation, the child wore the canula eight months; a pedunculated polypus was then found and was removed.

Gigou ("Union Méd.," 1862) recorded a similar case in a child of three-and-a-half years, the vegetations having occurred one month after the first tracheotomy.

Wanscher (Thèse de Copenhagen, 1877) operated again in a child of three years at an interval of three months.

Prompt intervention as soon as the cause of the trouble is determined cannot be too much recommended, and it is best done with the galvano-cautery, and without chloroform.

R. Norris Wolfenden.

Luistow (Göttingen).—*Grus Viridirostris Killed by Parasites of Syngamus Sclerostomum Molin.* "Centralbl. für Bacteriologie," 1890, No. 8.

THE bird died from suffocation. Its trachea was filled with the parasite.

Michael.

Onodi (Buda-Pesth).—*Experimental Researches connected with Paralysis of the Larynx.* "Monats. für Ohrenheilk.," July, 1891.

IN this number, Onodi gives the results of certain experiments, of which the details are to be found in preceding numbers of the "Monatsschrift." The following are his conclusions:—

1. The motor nerve of the direct muscles of the vocal cords is the recurrent laryngeal. The acceptance of the double innervation must be discarded along with all the hypotheses laid down in this sense concerning posticus paralysis and median position of the vocal cords.

2. The numerous points of junction between the superior and recurrent laryngeal nerves in man are the points of crossing, by which nerves from remote parts get to the different portions of the laryngeal mucous membrane. The nerves of the mucous membrane, demonstrable anatomically, cross in the middle line. The sensory nervous supply is bilateral.

3. In the dog, motor fibres for the laryngeal muscles are contained in the communicating nerves between the brachial plexus and the sympathetic, and also in the double strand between the lowest cervical and first thoracic ganglia.

4. The spinal accessory has nothing to do with the motor innervation of the larynx.

5. The isolated nerve-fibres going to the *crico-arytenoidei postici* lose their function sooner than those to the constrictor muscles. The *postici* die sooner than the laterales. The Rosenbach-Semon views thus receive experimental support.

6. Jelenffy's statement that the posticus can rotate the vocal process inwards is also experimentally confirmed.

Dundas Grant.

Solis-Cohen, J.—*Prescription for Irritability of the Vocal Cords.* "Times and Register," Dec. 20, 1890.

Dr. J. SOLIS-COHEN is credited with having advised the following prescription in a case of "irritability of the vocal cords from over-use" ;

℞ Tr. Benzoini comp.,
Tr. Opii camphor..... , ā ā f̄ss.
Aquæ ferv., q.s.
℥ Sig. Use as a gargle,

and direct the patient to use the vocal cords as little as possible. [The form of diagnosis may be found useful, and the prescription, if it does no more than conduce to the carrying out of the final instruction, may be found as useful as many others.] *Dundas Grant.*

NECK, THYROID GLAND, &c.

Bishop, Stanmore (Manchester).—*Excision of a large Bronchocle.* "Brit. Med. Journ.," May 9, 1891. Manchester Med. Soc., April 21, 1891.

REPORT of a case in a man, aged fifty-seven. A distinction was drawn between cases occurring in elderly men and in young females with reference to the probability of sequent myxœdema. *Hunter Mackenzie.*

Bornis (Tubingen).—*Cystic Goitre, of unusual size, Cured by Extirpation.*

THE case is the largest struma ever operated upon. The tumour was double as thick as the diameter of the trunk, and reached down to the umbilicus. It was removed by extra-capsular extirpation. The patient was cured in a short time. The tumour was a cyst, weighing ten pounds. *Michael.*

Stevenson, Louis E. (Carlisle).—*Treatment of Goitre by Partial Excision.* "Lancet," June 20, 1891.

FOUR cases successfully operated on by Dr. Lediard, embarrassment of breathing being extreme or imminent, and iodide of potassium having failed. In each case one lobe was notably the larger and was removed, rapid healing, under antiseptic precautions, and complete relief ensuing. *Dundas Grant.*

Berry, James (London).—*Lecture on Goitre ; its Pathology, Diagnosis, and Surgical Treatment.* Delivered at the Royal College of Surgeons of England. Lecture I. "Brit. Med. Journ.," June 13, 1891.

ALL goîtres may be divided for practical purposes into five classes : 1, parenchymatous ; 2, cystic ; 3, fibro-adenomatous ; 4, malignant ; 5, exophthalmic. Mixed forms were common, but exophthalmic goitre was structurally and clinically apart from all others. Neither heat, cold, rainfall, nor rarity of atmosphere had any share in the causation of the

disease. It is particularly prevalent in valleys, especially in those of mountainous regions, and this has led to an erroneous theory that it is due to want of air and sunshine. Its distribution is most marked over the region of that great deposit of sandstones, marls, and limestones known as the "marine molasse." After a careful analysis of the geological nature of the districts in England in which goitre is found, the author remarks : "From the foregoing it will be seen that goitre is distributed over a very large surface of this country. Its coincidence everywhere with calcareous rocks, which are also very widely distributed in England, is one of the most marked features of its distribution. It is not only upon limestone, but also upon calcareous sandstones that goitre is found." The character of the water obtained from these rocks was briefly described, and the opinion was expressed that there was usually some connection between goitre and the amount of mineral in the water. Neither hard nor ferruginous waters produced the disease ; in this connection the fallacy of supposing that because a metal is contained in a particular rock it is necessarily present in the water derived from that rock was pointed out.

The author next referred to the facts that in goitrous districts the lower animals also suffered from the disease, and that attempts to artificially induce it in such had failed. But that it can be produced by water has been shown by experiments that have been accidentally carried out upon man himself, as in the outbreaks of epidemic goitre that have been so often recorded. On the Continent there are well-known goitre wells to which young men resort who wish exemption from military service.

The author concludes by remarking "that there exists some poison in the soil upon which it is found, and there can be no doubt that in the vast majority of cases drinking water is the vehicle by means of which that poison obtains access to the body." The author further states that he is "inclined to believe that the cause will be found to be in one of the mineral ingredients of drinking water, probably not a salt of iron, but possibly one of the alkalies or alkaline earths, not lime or magnesia." He, however, does not feel justified in expressing a decided opinion on this subject.

Some of the chief symptoms of goitre were then briefly discussed. As a rule, in the majority of cases it does not tend to shorten life, though in some instances, especially in young people, the pressure upon the trachea was enough to cause death. In elderly people it sometimes did shorten life very considerably by diminishing the calibre of the trachea so much that if bronchitis or other disease supervened, the patient had a much smaller chance of recovery.

Hunter Mackenzie.

Hammar, A. (Sweden).—*A Case of Basedow's Disease without Morbid Changes of the Cervical Portion of Sympathicus.* "Upsala Läkareförenings Förhandlingar," Vol. 24, pp. 200—204.

AT the *post-mortem* examination of a woman, aged forty-three, who for several years had exhibited marked symptoms of Basedow's (Graves') disease, the microscopical examination of the cervical portion of the

sympathicus and of the five cervical and upper dorsal ganglia did not reveal anything abnormal. The heart was perfectly normal.

Holger Mygind.

Cardew, Denton H. W. (London). *The Practical Electro-therapeutics of Graves' Disease.* "Lancet," July 4 and 11, 1891.

THE writer divides cases of Graves' disease into four classes:—1. Cases that undergo spontaneous recovery, including cases of women who recover during subsequent pregnancy; 2. Cases that obtain relief from appropriate drug treatment; 3. Cases that obtain relief or cure from an appropriate electrical treatment; 4. Cases that derive no benefit from any treatment—and believes himself justified in stating that cases which derive any benefit from an appropriate drug treatment would derive an equal, if not greater, benefit from an appropriate electrical treatment. He recommends the use of galvanism in very weak currents (two to three milliamperes), applied for six minutes three times a day, the anode being placed on the nape of the neck, the centre of its lower border corresponding to the seventh cervical spinous process, and held firmly in that position during the application, while the cathode is moved up and down the side of the neck from the mastoid process along the course of the great nerves. The anodal electrode is a circular disc of flexible metal three inches and a half in diameter, the cathodal one of an inch and a half, both being covered with wash-leather. They should be moistened with plain warm water unless (as at night) it is not procurable, when cold water with a few drops of vinegar may be employed. As regards cells, four Leclanché's, three bichromate, four Schall's liquid chloride of silver or six of the dry will suffice. After each application the skin should be carefully dried and dusted with starch powder, and the right and left side of the neck should be selected alternately. The directions given are such as to enable patients to carry on the treatment for themselves at comparatively small outlay, and to enable them to test their batteries from time to time. Mr. Cardew is having a simple form of voltameter constructed.

Mr. Cardew does not find any advantage from applying the cathode to either the right or left side of the neck in preference, nor any benefit accruing from applying a weak current to the lids when there is exophthalmos, Von Graefe's or Stellwag's signs.

In favourable cases the first symptoms to disappear are the minor nervous troubles, depression, irritability, restlessness and insomnia. The general health thus improves and the tremors disappear. The cardiovascular symptoms then yield, and lastly the thyroid and ocular conditions.

Several illustrative cases complete this practical and interesting paper.

Dundas Grant.

Voelcker (London).—*Tuberculosis of Thyroid Body.* "Brit. Med. Journ.," May 25, 1891. Path. Soc. of London, May 19, 1891.

A CARD specimen.

Hunter Mackenzie

Cummins, H. A. (Sikkim).—*Myxædema in Thibet.* "Brit. Med. Journ.," April 4, 1891.

THE author briefly records two cases met with in Thibet, and appends a

table showing the results of examination of sixty-three Thibetan prisoners as to the condition of the thyroid gland. Of these, thirty-six had normal glands, and in the remainder (twenty-seven) enlargement to a greater or less extent was present.

Hunter Mackenzie.

Dunn, J. (Richmond).—*Pyoktanin in a Case of Scrofuloderma*. "New York Med. Journ.," May 23, 1891.

A BOY (mulatto), aged fourteen, presented enlarged glands, ulceration, and scabbing of the skin under the chin and on the face, and discharge of foul-swelling matter. There were ulcers on the throat, one on the left cheek, one on the right cheek, and one from the angle of the jaw on the left side to that on the right side. The submaxillary lymph-glands were greatly swollen. One ulcer was scraped, and five per cent. pyoktanin solution applied, but the scabs re-formed; then ten per cent. pyoktanin was applied, and the ulcer covered with collodion to keep out air. This time a clean surface, without offensive discharge, was left after removal of the scab, and under further applications it healed. The other ulcers also healed under the same treatment. Removal of the scabs should be effected, the parts be thoroughly curetted, and projecting shreds of tissue be removed with scissors. The unhealthy skin at the edges should be cut away. When bleeding has ceased, carefully dry the ulcer, and paint with a saturated solution of pyoktanin. Then protect with collodion. Thus the atmosphere is excluded for several days. The dressing should be applied daily till the parts assume a healthy appearance. There is nothing special about pyoktanin, and perhaps any antiseptic would do as well.

R. Norris Wolfenden.

SOCIETY MEETINGS.

FRENCH OTOLOGICAL AND LARYNGOLOGICAL ASSOCIATION.

Annual Meeting, 1891.

Dr. FAUVEL (*the ex-President*) retiring, Dr. RUAUTL (*President*) occupied the Chair.

Dr. SUAREZ DE MENDOZA read a paper on *The beneficial effects of Pilocarpin in a severe case of Œdema of the Glottis*. The patient was threatened with asphyxia, and tracheotomy was proposed, but it was thought justifiable to give pilocarpin a trial. A total of twenty-five millegrammes was injected, in three parts, at intervals of twenty minutes. The first gave some relief, and a quarter of an hour after the third the patient breathed quite calmly.

Dr. MOURE. *Empyema and Spurious Empyema of the Antrum.*

Two patients presenting the classical symptoms of empyema of the antrum were found to have suppurating cysts in the middle meatus at the

level of the ostium of the sinus, and were rapidly cured by means of the galvano-cautery.

Dr. LUC enquired as to the condition of the teeth. He protested against the extraction of sound teeth, preferring to perforate through the canine fossa.

Dr. SUAREZ DE MENDOZA advised exploratory puncture in the canine fossa when the teeth were sound, considering that such an operation, performed by means of a fine drill and dental engine, was no more troublesome than the prick of a hypodermic syringe in the arm. Moreover, by the substitution of a trochar for the drill the diagnosis might be completed by means of aspiration. He thought it was always possible to tell whether or not a tooth was diseased before having recourse to extraction if sufficient skill and care were employed.

Dr. MOURE stated that in his cases the teeth were sound, but he did not consider this fact of much importance as bearing upon the diagnosis of empyema of the antrum, because he had pretty frequently seen empyema without dental disease.

Dr. GOUGUENHEIM agreed with this view, but believed it difficult to tell whether a tooth was carious, as it might be sound at the crown but carious at the root.

Dr. RUALT considered the two cases as illustrations of errors in diagnosis. He thought electric transillumination ought to have been employed. It had enabled him to diagnose a case presenting the symptoms of antral empyema as being in reality one of partial necrosis of the unciform process, curable by the curette.

Dr. MOURE replied that in the first case he perforated with the expectation of demonstrating the absence of empyema, and in the second he cured the patient without tapping the antrum. He did not consider the method of electric illumination of much value, as he had seen loss of transparency in cases of healthy sinus, and transparency in the presence of empyema, though naturally of slight degree.

Dr. GOUGUENHEIM did not consider electric illumination could give infallible signs of the presence or absence of pus in the maxillary sinus.

The PRESIDENT (Dr. RUALT) spoke very strongly in support of the employment of electric illumination, but insisted on its being well carried out. It was necessary to make use of lamps of different degrees of intensity for use according to the requirements of the various cases. Sometimes, he admitted, the bones were very thick, and then, especially in old people, the light of the lamp held in the closed mouth might fail to traverse a healthy antrum, but this was exceptional. Usually it shone through the antrum and lit up the lower eyelid. If the lower lid of one eye was illumined but the other remained dark, and the patient blew from this latter side pus which the rhinoscope showed to come from the middle meatus, one could affirm the existence of suppuration in the sinus. At the same time, while the lower lid was dark, the portion of the cheek subjacent to it and corresponding to the sinus might be bright although there was empyema. He accounted for this phenomenon as follows:—When the patient blows his nose the contents of the cavity are drawn up—

wards and the concrete portion of the liquid plasters itself on the upper parts of the walls of the sinus, while the more watery portion runs down.

He considered total opacity of the cheek constant whenever the antrum was full, or contained a large quantity of pus, and that obscurity of the lower lid was constant when there was a layer of concrete pus in the upper parts of the antrum. As this obscurity disappeared only gradually under successful treatment, he thought it might be due also to thickening of the mucous membrane underlying the pus. In those exceptional cases of diseased sinus in which translucency was present, it was very slight, and there was very little thickening of the mucous membrane, and very little fluid in the cavity. Out of forty cases of distinct empyema, translucency was only made out in three, and in one of them it was slightly diminished.

The method was of great value, and, with due regard to the possible sources of error, it should not be neglected. Without it the examination of the antrum was incomplete.

Dr. NOQUET. *Late Hereditary Syphilis of the Nasal Fossæ.* A young girl of twelve years of age, with discharge from the nose and formation of crusts, fetor distinct from that of ordinary *ozæna*, and, after cleansing, an obvious perforation in the cartilaginous septum. There was evidence of former keratitis, characteristic teeth, scars on the palate and uvula, and squamous syphilides on the legs. Under constitutional treatment, by means of Sirop de Gibert and the "chaussettes Napolitaines" of Denis-Dumont, and the local use of resorcin and chlorate of potash, speedy improvement took place.

Dr. GELLÉ, in the discussion following the reading of this paper, stated that he had been led to diagnose specific disease from the appearance of the nasal fossæ in a case of progressive deafness without any marked lesion of the tympanum, and in a case of Jacksonian epilepsy. In both a favourable effect was produced by anti-syphilitic remedies.

Dr. MADEUF. *A Case of Epithelioma of the Nose in a Patient aged Twenty-three.*

The patient had a tumour in the right nostril, which at first resembled a polypus, but without its consistency or mobility. On microscopical section of a fragment removed it appeared to be an epithelioma. Dr. Després, without employing rhinoscopy, had diagnosed periostitis.

Dr. RUAVLT and Dr. NOQUET, after examining the patient, thought the microscopical evidence ought to decide.

Dr. MADEUF. *On the best Mode of Treatment to follow the Removal of Adenoid Vegetations.* The return of mouth-breathing, some time after the operation, was accounted for by the occurrence of a chronic catarrh of the nasal mucous membrane, called upon so suddenly to perform the natural functions to which it had been unaccustomed. In addition to warm saline nasal injections, snuff-powders, constitutional treatment by means of iodo-tannic syrup, etc., the nasal mucous membrane should gradually be habituated to the passage of air. He therefore, if possible,

divided the operation over several *séances*, but if circumstances obliged him to complete it in one, he advised the patient to wear a little muslin in the nostrils so as to distribute the respiration between the mouth and nose.

Dr. MOURE said that in general the chronic coryza disappeared of itself after the removal of the vegetations. A few alkaline or antiseptic irrigations hasten the completion of the cure.

Dr. NOQUET agreed with the last speaker. He had observed some cases of foetid vegetations in which treatment of the nasal fossæ made life quite supportable, and rendered operation on the growths unnecessary.

Dr. CHATELLIER was of Dr. Moure's opinion. He had studied the microbes in adenoid vegetations. They were the same as were found in the ears in purulent otitis, and in the nose in coryza. The adenoid tissue was the seat of an affection which became permanent after several coryzas.

Dr. GAREL. *Spontaneous Disappearance of Papilloma of the Larynx in a Child after Tracheotomy.* Two cases in Dr. Garel's practice illustrated the possibility of the spontaneous disappearance of laryngeal papillomata in children after the performance of tracheotomy.

One, a girl of four years of age, was attacked by influenza, affecting chiefly the bronchial mucous membrane. Cough gave way to hoarseness, which in three months changed to aphonia. In four or five months' time respiratory difficulties commenced, and her case was submitted to Dr. Garel. The laryngoscope revealed the presence of a tumour of marked papillary appearance occupying the whole of the left side of the larynx and the inter-arytenoid space, nearly touching the opposite cord, which was quite normal. Tracheotomy was performed without difficulty, and rapid recovery from the operation took place. In a fortnight, however, the tube was coughed out, owing to an accident to its fastenings, and the patient was hurriedly brought again to Dr. Garel. He replaced the canula, but was much surprised to observe that the hoarseness had disappeared, and that the voice seemed nearly normal. A laryngoscopic examination was subsequently made, and it was found that there did not remain a single trace of the papilloma. The tube was then removed, and the child recovered perfectly.

The other was a boy, aged eleven, with hoarseness and almost complete aphonia, followed by gradually increasing dyspnoea. A complete laryngoscopic examination was impossible, but the epiglottis presented some papillomatous granulations justifying the assumption that the respiratory trouble was due to similar growths at the level of the glottis. Tracheotomy was soon necessary and the canula was retained for two years. At the end of that time the epiglottis was seen to have become normal, and the vocal cords showed nothing likely to threaten suffocation. The canula was then removed and the boy did well.

The spontaneous disappearance of papilloma was admitted by Thost (*Deutsche Med. Woch.*, May, 1890), who declared that the papillomata of children disappeared at puberty, and went so far as to say that they were without danger. Dr. Garel differed as to the safety of a tumour capable of causing such attacks of suffocation as to endanger life. He quoted cases

in support of this opinion. As regards the explanation of the disappearance of papillomata, he thought it quite intelligible if we looked on their development not as a tumour-growth, but as proliferation of mucous membrane. This proliferation may take place under the influence of direct irritation of the mucous membrane by purulent or other secretions, and especially during the period of growth of the body generally. This proliferation was, however, sometimes the precursor of grave disease of the larynx, as pointed out by Gouguenheim, in his paper "On the relation of Papilloma of the Larynx to Tuberculosis" (Congrès Internat. de Paris, 1889), and also as illustrated in a historical case in which a warty pachydermia masked a profound organic lesion.

In conclusion, Dr. Garel insisted that, in cases of papilloma in children calling for tracheotomy, it was our duty to wait patiently after that operation for the possible spontaneous disappearance of the growth, and to put off to the very last any recourse to the more dangerous operation of thyrotomy.

Dr. LACARRET. *Acute Arthritis of the Crico-Arytenoid Articulation.*

This paper, of which we hope to give a more extensive *résumé*, draws attention to the characters of this localized form of laryngitic disease. The account of the subject is enriched by a number of striking clinical histories of cases classified according to their etiology:—(1) *a frigore*; (2) inflammatory propagation—syphilis—chondro-sarcoma—malignant disease—measles—typhoid fever—small-pox; (3) traumatism; (4) rheumatism; (5) gonorrhœa; (6) infection—typhoid fever.

Dr. GELLÉ. *A Vertebral Artery visible in the Pharynx.*

On examining the throat of a patient, Dr. Gellé observed regular pulsations isochronous with the pulse on the left half of the posterior wall of the pharynx. They were visible over an extent of about four centimètres in a line curving upwards, and gave the idea of a voluminous artery. The lateral walls of the pharynx were well to the outside of the region of pulsation. He considered the vessel too large and its position too evidently sub-pharyngeal (? post-pharyngeal) for it to be the ascending pharyngeal artery. Its isolated position and the absence of any branch given off in this course led him to think that it was not the internal carotid, but rather the vertebral artery pursuing an unusual course. It was known at times to enter its osseo-fibrous canal at the level of the fifth, the fourth, the third, or even the second vertebra, and it had been seen to leave its canal at the level of the third, and re-enter at the level of the atlas.

Dr. MOURE had pretty frequently observed such pharyngeal arteries, and remarked that some American authors had drawn attention to them.

Dr. RAULIN (Marseilles). *Hypertrophy of the Mucous Membrane of the Posterior Segment of the Septum Nasi, with Voice Troubles.*

Dr. SUAREZ DE MENDOZA. *A Form of Antero-Posterior Laryngeal Forceps, allowing the Seat of Operation to be seen during the whole time of its Performance.*

A kind of fenestra in the blades permitted the effect described.

Dr. RUAULT having criticized the instrument favourably,

Dr. MENDOZA, in replying, averred that it was much more easy to see the growth when using his forceps than when using very delicate antero-posterior forceps of ordinary construction, even if inclined considerably to one side.

Dr. WAGNIER (Lille). *Contribution to the Study of the Relation of Adenoid Vegetations with Chronic Suppurative Otitis.*

Six cases in which a rapid cure of the middle ear disease followed the removal of post-nasal adenoids. He attributes the result to the improvement effected in the condition of the Eustachian tubes.

Dr. RANGE. *Photographs of Anatomical Preparations of the Larynx.*

These were taken from the larynx of the bullock, which showed on a large scale certain anatomical relations difficult to demonstrate in the human larynx, though otherwise identical.

Prof. MASSEI (Naples). *Intubation of the Larynx in Adults.*

In twelve cases Dr. Massei has practised this method in adults—five times for laryngeal syphilis, thrice for tuberculosis, twice in order to dilate the larynx after tracheotomy, once for papilloma, and once for pachydermia laryngis. In suitable cases permanent intubation effects rapid improvement, and frequently renders tracheotomy unnecessary. It should not be resorted to in cases of diaphragms or masses of granulations until these obstacles have been removed by operation.

Dr. LAVRAND. *A Case of Recurring Erysipelas of the Face.*

A hospital sister, suffering from recurring erysipelas for which no cause could be ascertained, was completely freed from her trouble by the removal of post-nasal adenoids. Dr. Lavrand considers that Fehleisen's micro-organism may find a means of entry by the naso-pharynx, and advises the careful examination of the back of the throat in such cases as he has described.

ANNUAL ASSEMBLY OF BELGIAN LARYNGOLOGISTS.

Twelfth Session, May 17, 1891.

Reported by Dr. HICQUET, Brussels.

Dr. CAPART, *President.*

Present: ANDRIES (Landen), BAYER (Brussels), BECO (Liège), BOLAND (Verviers), BOVAL (Charleroi), CAPART (Brussels), CHALANT (Liège), CHEVAL (Brussels), CHARLIER (Brussels), D'ANDOIS (Louvain), DEKEGHEL (Ghent), DELIE (d'Ypres), DELSAUX (Brussels), DELSTANCHE (Brussels), EEMAN (Ghent), ELSMORTELS (d'Anvers), GEVAERT (Ghent), GORIS (Brussels), GOUGUENHEIM (Paris), GUYE (Amsterdam), HENNEBERT (Brussels), HICQUET (Brussels), JOAL (Paris), LAURENT (Hal), NOQUET (Lille), SCHUSTER (Aix-la-Chapelle), SCHIFFERS (Liège), WAGNIER (Lille), and WODON (Brussels).

On the motion of Dr. EEMAN, the assembly decided to meet at Ghent next year.

Dr. RUTTEN presented a case of division of the palatine arch, permitting to be seen the bursa pharyngea and the orifice of the bursa. From examination of the case Dr. Rutten expressed the opinion that the pouch described under the name of "bursa of Luschka" is not a bursa, but one of the median lines of glands transformed into a cystic cavity as a result of chronic inflammation. The region seen by Tornwaldt—an opinion already held by many others—even more than the fossettes of Rosenmüller, may be the seat of localized catarrh; these regions of the palatine vault are more predisposed to troubles of secretion, and, in the third place, the glands of these regions, as a consequence of certain circumstances accompanying chronic inflammation, may submit to veritable transformations, which are sometimes manifested as punctiform depressions, sometimes as veritable pockets or cystic cavities.

The term "saccular pharyngitis" seemed to him to be the best term to indicate this particular condition.

Dr. SCHUSTER (Aix-la-Chapelle) presented a patient with *paralysis of the left vocal cord*. The patient had had syphilis for eighteen years. For three years he had had difficulty of deglutition, which disappeared after mercurial injections. The paralysis was isolated, and as such had much analogy to the uni-muscular paralyses of the eye; but it differed in that it was persistent, whilst the former are transitory. The patient at the same time presented anæsthesia of the arch of the palate. He had taken nearly thirty grammes of iodide of potassium daily, and had been repeatedly subjected to mercurial treatment, but the anatomical condition had not been modified; the voice was improved from the fact that the non-paralyzed cord enlarged its extension movements and met the other one on phonation.

As all local causes had been eliminated, Dr. Schuster was convinced that this paralysis was due, in spite of the specific treatment, to the general condition—i.e., syphilis.

Dr. CAPART presented (1) a patient in whom, after *ulceration of the tonsil* (in which Koch's bacilli were found), there occurred *ulceration of the arch of the palate and subsequent perforation*; these ulcers healed rapidly under pyoktanin. (2) *A case of tuberculosis of the tongue*, which was operated upon first for epithelioma, but the wound did not cicatrize and tubercles were formed; the larynx was also affected with tuberculosis. (3) A patient operated upon through the inferior meatus for *empyema of the maxillary sinus*. The anterior wall of the sinus had disappeared and was found to be replaced by a mass resembling frog-spawn. Capart performed resection of the maxilla, and the patient made a good recovery. (4) Two patients with *laryngeal tuberculosis*, in whom the ulcerations had improved under pyoktanin.

Dr. CHEVAL presented for Dr. Rousseau *two electric curettes* for adenoid vegetations. They are made on the model of Gottstein's and Hartmann's curettes. The cutting edge is replaced by a platinum wire which is heated. It is hoped with this instrument to avoid (1) hæmorrhage, (2) infectious or inflammatory complications.

Dr. CHEVAL exhibited apparatus for electric lighting, which served also for galvano-cautery purposes. He demonstrated the necessity of a rheostat

and an amperimètre in applications of the thermo-cautery. He also showed that platinum cauteries are not economical, since they consume more electricity than iron cauteries.

Dr. BAYER insisted upon the importance to specialists of not always seeking for the cause of *reflex asthma* in the upper respiratory passages. He has met with a good number of cases of asthma, with nasal and naso-pharyngeal affections, in which the disorder persisted in spite of cure of the nasal affections. In these cases Bayer has constantly remarked gastric troubles which gave rise to reflex symptoms and which are characterized by the following signs—constipation, distension of the stomach, flatulent dyspepsia. Treatment consists in severe *régime*, alkaline mineral waters, correction of constipation, and abdominal massage.

Dr. MOLL recorded the results of treatment of *One hundred and three Cases of Laryngeal Stenosis of Diphtheritic Origin*. He had performed intubation ninety-two times and tracheotomy eleven times. Of the ninety-two intubations he had had thirty-seven cures (42·2 per cent). Of these thirty-seven cures thirty-one were cases of infants of tender age, as follows :—

One year old—six cases, with two cures = 33 per cent.

Two years old—eight cases, with three cures = 37·5 per cent.

Three years—seventeen cases, with seven cures = 41 per cent.

Intubation is completely harmless, and prognosis is so much the more favourable as the children retain the tube well. Three times he has seen sudden death from obstruction of the canula, and in one case a child died from the tube becoming buried in the trachea. Dr. Moll avoided this occurrence by connecting the tube with a thread, which he passed through the nose and affixed to the head.

Dr. NOQUET presented *A Case of Nasal Tumour, supposed to be Papilloma*. As microscopic examination has not been made, he could not be certain as to the nature of the tumour. It was situated at the posterior extremity of the inferior turbinated body, having a pretty broad pedicle, and being soft and mobile. It was removed in several sittings by the cold wire snare. It had the size of a raspberry. True papillomata, remarked Noquet, are very rare; he has, however, already reported one case. Many authors have included under the denomination “papilloma” all tumours of papillomatous appearance, such as adenomas, angiomas, papillary sarcomas, and true papillomas.

Dr. WAGNIER drew attention to the *Influence of Nasal Affections upon Ocular Affections*. He related the history of a young girl with epiphora and chronic dacryo-cystitis in very pronounced form, in whom ablation of a papillomatous tumour of the inferior turbinated had a very clear and distinct effect upon the cure of this rebellious affection.

Dr. DELIE presented (1) *A Calculus of the Tonsil*, two centimètres long, one centimètre broad, and half a centimètre thick, extracted from the tonsil of a girl eleven years of age; (2) the notes of the case of a boy, thirteen years of age, operated upon for adenoid vegetations, with cure. The tumour recurred and was operated upon by the galvano-cautery. At the end of some weeks fresh recurrence took place, and a new

operation was again followed by recurrence, accompanied with glandular swelling. The child died suddenly, and microscopical examination demonstrated a globo-cellular sarcoma. He concluded (1) that adenoid vegetations might recur; (2) that repeated recurrences ought, even when microscopic examination was negative and the general health remained good, to arouse the suspicion of the possibility of the transformation of an innocent into a tumour of malignant nature; (3) the most severe hæmorrhages do not always accompany the most developed sarcomas.

Dr. SCHIFFERS presented the specimen from a case of *Laryngo-Tracheal Stenosis produced by compression of a Mediastinal Cancer*. There was complete immobility of the left vocal cord, and luxation forwards of the arytenoid cartilage of the same side. On opening the thorax, resistant nodosities of the volume of a small apple were found in the mediastinum above the vessels of the base of the heart. Similar nodosities extended round the vessels and trachea. The larynx showed the luxation of the arytenoid seen during life; the trachea was compressed by glandular masses occupying the region of the pulmonary hilus. The left bronchus itself disappeared in the mass, and was notably contracted: it appeared to be invaded by the carcinomatous mass. The patient, who was fifty years of age, had only been five days in the hospital, and succumbed to progressive asphyxia. He had complained of difficulty of respiration for about three months, and of vocal troubles, consisting of hoarseness lasting two and a half months. Appetite was preserved, and he had no cancerous cachexia. The diagnosis of laryngo-tracheal stenosis, due to cancer of the mediastinum, had been arrived at by exclusion, and especially from the existence of glandular masses in the retro-maxillary region of the left side and in the side of the neck.

Dr. HICGUET showed his *modification of the adenotome of Gottstein*. When the latter is used it abuts against the posterior edge of the septum, and any portion of the adenoid growths extending into the choanæ cannot be removed. In order to remedy this inconvenience, Hicguet has had the ring made in heart shape, so that the two lateral portions may penetrate into the choanæ, whilst the septum is lodged in the depression in the centre of the ring. By this means the adenoid tumour may be removed at a single "coup."

He then related the history of a young girl, seventeen years of age, afflicted with *hysterical aphonia*, and presenting the laryngoscopic image which Jonquière, of Bern, has designated "spasmodic aphonia." During phonation the vocal cords meet with force in their anterior third, leaving behind a kind of triangle. Electricity, douches, and general treatment having remained without effect, Dr. Hicguet then had recourse to the treatment recommended by Jonquière, *i.e.*, compression of the ovaries. At the end of some minutes the voice returned clearly, and the glottis contracted normally. It appeared to Dr. Hicguet that it would be more correct to designate this affection under the term "hysterical paralysis of the inter-arytenoids," for spasm of the adductors seems but little demonstrated; the forced contiguity of the anterior portion of the vocal

cords seemed to him to be the result of the effort made by a group of muscles commonly seconded by another group actually paralyzed, viz., the inter-arytenoid. If, as Jonquière says, compression of the ovaries causes certain spasms to disappear, it is quite otherwise in the larynx, where it causes spasm to appear. Those who assist at laparotomies know that each time the operator touches the ovaries there is a laryngeal spasm produced.

Dr. LAURENT presented *microscopical sections* of a tumour operated upon at the clinic of Dr. Gouguenheim, of Paris, which he designated under the name of *pre-epiglottic fibrous tumour*. A good deal of fine fibrous tissue was met with, connective tissue cells, and some vessels. The preparations were submitted to Prof. Cornil and Prof. Latulle, who unhesitatingly pronounced them to be fibrous.

Dr. BOLAND read notes of two cases of *fibrinous rhinitis*. A little boy and a little girl in the same family suddenly suffered from nasal obstruction, bilateral in the first, and limited to the right side in the other. The nasal cavities were filled with a compact, adherent, white, milky exudation. When removed, epistaxis occurred, but little fever or general disturbance. The membranes were eliminated after the eighth day, and an abundant purulent secretion succeeded, which lasted a month. The parts then retook their normal appearance, except for an adhesion between the septum and the inferior turbinated in the little boy.

Dr. Hicquet (Brussels).

BRITISH MEDICAL ASSOCIATION.—BOURNEMOUTH MEETING.

July 28, 1891.

SECTION OF MEDICINE.

The following paper was read in the section of Medicine :—*Erysipelas of the Pharynx and Larynx*, by Dr. F. DE H. HALL.

It will, I think, be convenient if I preface my remarks on erysipelas of the pharynx and larynx by giving the notes of a case of this disease recently under my care in the Westminster Hospital. The high temperature which was attained in this case, and the slight amount of discomfort the patient appeared to suffer from the febrile state, are particularly noteworthy. The patient, a carman, aged twenty-one, was admitted into the hospital on October 26th, 1890, under Dr. Sturges, and was subsequently transferred to my care. He came complaining of great difficulty in breathing, sore throat, and pain in swallowing. He stated that he had been in excellent health until the morning of the fourth day, when on waking he found that his voice was hoarse. During the day he became worse, and the breathing became progressively more difficult. The family history presented no points of interest. *Previous history* : The patient stated that he had always been strong and healthy, and had never suffered from any serious illness. On several occasions he has had a sore throat, the last attack of the kind having been about a year ago. The attacks have never been severe, recovery always taking place in a

few days. His occupation necessitates exposure to all weathers. No history of rheumatism or syphilis. Is a moderate drinker. There has not been any erysipelas in the neighbourhood so far as he is aware. On admission, patient appeared to be a strong, well-nourished man. Face slightly flushed. He has difficulty in breathing, exaggerated at intervals, and at such times there is a certain amount of stridor. There is some retraction of costal margin. Percussion note over the whole of the chest good. Respiratory sounds somewhat tracheal in character, otherwise normal, 40 to the minute. Heart normal, pulse 124, very small and compressible.

On examining the pharynx it was seen to be of a dark-red colour, and generally œdematous, especially the uvula. On laryngoscopic examination the epiglottis was seen to be club-shaped, the ary-epiglottic folds greatly swollen, the glottis being reduced to a mere chink. The vocal cords could not be seen. Patient sweats a good deal. Urine, 1036 acid; no albumen or sugar.

Hot fomentations were applied to the throat, and benzoin inhalations were ordered. Towards evening he became worse, the spasms of dyspnœa becoming more frequent, occurring about every fifteen minutes. As the general œdema of the larynx seemed to be increasing, the epiglottis, tonsils, and pharyngeal mucous membrane were freely scarified with the point of a knife, affording immediate relief to the symptoms. Intubation and tracheotomy instruments were prepared in case of an emergency, but the patient passed a fairly comfortable night, and was able to take some nourishment. Occasional stridor.

October 27th.—The pharynx and epiglottis are still very œdematous, but less so than on the previous day. Patient still breathes with considerable stridor, and has frequent attacks of dyspnœa. Nothing abnormal in chest or abdomen. An ice collar was ordered to be applied round the throat, with ice pellets to suck; the throat was painted with a twenty per cent. solution of cocaine, which was followed by a free discharge of mucus, giving considerable relief. He was ordered a mixture, containing potass. bromide gr. x. in haustus ammonii acetatis ʒi., to be taken every four hours. On examination shortly after the application of the cocaine the pharynx and epiglottis were seen to be much less swollen than before. Pulse 120, still feeble and compressible. Respiration 36.

Patient took his nourishment well, and there was much less stridor during the remainder of the afternoon. The dyspnœa, however, increased at night, and the throat was again painted with cocaine. Patient again experienced considerable relief from the application, and passed a tolerably comfortable night.

October 28th.—Patient considerably better to-day; breathing much easier; voice still very hoarse, though clearer than before. Pharynx much less congested. Epiglottis rapidly diminishing in size. Cords cannot yet be seen. The temperature has varied between 105° and 103° Fahr.

October 29th.—Patient's temperature at 5 a.m. was 106°, but he was not apparently distressed thereby, and was not delirious. The swelling of the throat and epiglottis was still present, but was gradually diminishing. It was discovered to-day that the condition of the pulse which, throughout

has been very small and compressible, is due to an abnormal distribution of the radial artery, the median artery taking its place in the fore-arm. The patient was sponged at intervals, and was once packed in ice in order to bring down the temperature.

October 30th.—Patient is much better this morning. Voice greatly improved. The improvement was maintained on the following days, and patient was discharged well on November 12th.

It seems to me that the notes which I have read should be classed under the head of erysipelas of the pharynx and larynx. I have had the opportunity of seeing six cases which I refer to this category, three private and three hospital patients. The three private patients died, whereas the hospital patients recovered. In all the attack was sudden, and in all but one there was marked pyrexia. In the case I have given in detail the temperature was very high, and could only be brought down by energetic treatment.

In Case 1, a clergyman, aged forty-nine, seen with Mr. May, of Bexley, the inflammation was limited to the pharynx. There was a considerable amount of albumen in the urine. Œdema of the lung followed, and death took place from exhaustion in the week.

Case 2 was that of a lady, aged fifty, who was seized with acute inflammation of the pharynx, which spread to the larynx. The urine in this case was also albuminous, and she too succumbed on the eighth day from exhaustion.

Case 3: A publican, aged thirty-six, died after three days' illness. When I saw him on the second day, the swelling of the epiglottis and of the ary-epiglottic folds was already so enormous as to completely occlude the view of the glottis. Tracheotomy was performed by Mr. Andrew Clark as soon as he could be summoned. The operation gave immediate relief, but a few hours later a blush appeared on the neck, and twelve hours after the operation the neck became greatly swollen. The patient died suddenly the next day. No *post-mortem* examination was allowed.

Cases 4 and 5 are reported in the Westminster Hospital Reports, Vols. II. and IV. respectively.

Of recent years erysipelas of the pharynx and larynx has received much attention, and Massei has written an able treatise on the subject, in which he gives particulars of fourteen cases of primary laryngeal erysipelas. He understands by the term a colossal acute swelling of the epiglottis and of the ary-epiglottic folds, which stands in no relation to a previous scald or ulcerative process, and which is accompanied by highly marked, extremely tumultuous symptoms, elevation or depression of temperature, dyspnœa, and difficulty of swallowing. Massei distinguishes two forms. In the one, the general symptoms are most prominent; in the other, the local changes take the first place, or are at least of equal grade with the general infection. Of my own cases, 1 and 2 would belong to the first form, and the remainder to the second.

Massei refers the disease to erysipelas on the following grounds:

(1) The rapid development and the tendency to wander, as well as the preference for the parts in which the lymphatic network is most developed;

(2) the fever and its course entirely corresponding to the fever of erysipelas; (3) the atypical course depending upon the tendency to wander; (4) the extension of the process to the lungs, and finally the etiological factor of the occurrence of the disease in groups. Massei does not appear to have attempted to demonstrate the presence of the erysipelas coccus. Cardone, of Naples, reports four cases of primary erysipelas of the pharynx. He demonstrated the streptococcus of Fehleisen in numerous preparations. He made cultivations, and subsequently injected rabbits with positive results. Ryland, of Birmingham, writing in 1837, gives a very clear account of erysipelatous laryngitis, in which he clearly distinguishes between erysipelas spreading from the external surface of the body, and cases in which the inflammation of the internal organs was unaccompanied by external erysipelas.

Some observers do not hesitate to assert that non-traumatic cedema of the larynx is always the result of erysipelas. Gerhardt points out that erysipelas of the pharynx arises on account of the possibility of infection through a physiological wound. That fissures in the epithelium do exist has been proved, especially where lymph follicles abound, as is the case in the tonsils. Hence, enlarged tonsils may afford entrance to the septic infection of erysipelas as they do to diphtheria, scarlet fever, and other poisons. In cases of recurrent erysipelas of the face the pharyngeal tonsil has apparently been the starting-point of the erysipelas, and it is well known that the nose, especially when affected with chronic and serofulous rhinitis, frequently gives rise to facial erysipelas. These facts would emphasize the importance of the careful examination of the nose and naso-pharynx in cases of recurrent erysipelas of the face, and they would also suggest a possible mode of origin of pharyngeal and laryngeal erysipelas; for if the disease can spread externally, there is no obvious reason why it should not spread internally. Erysipelas may spread from within outwards, through the nostrils, through the lacrymal duct, or through the Eustachian tube and the external meatus. Massei believes in the extension of the erysipelatous process from the larynx into the lungs, through the lymph paths, but he also states that the larynx and the lungs may be simultaneously affected.

Erysipelas of the pharynx and larynx when secondary usually extends by continuity, but cases have been recorded in which erysipelas of a remote part has been accompanied by erysipelas of the larynx. In reference to the extension of erysipelas from the cutaneous surface internally, and *vice versa*, I would like to ask the question whether the line of junction between the skin and mucous membrane offers any impediment to the spread of erysipelas, acting like a line of demarcation, as painting with a strong solution of nitrate of silver seems to do? The comparative rarity of erysipelas of the head and face spreading to the pharynx would favour this view.

The subject of acute infectious inflammations of the pharynx and larynx was discussed at the International Medical Congress at Berlin. Massei reiterated his views as to the nature of erysipelas of the pharynx and larynx. Moritz Schmidt makes a distinction between primary acute infectious phlegmon of the pharynx and erysipelas by the less amount of

fever in the former, by the redness being less intense, and not having a varnished appearance. Semon's view that erysipelas, phlegmonous pharyngitis, angina Ludovici, and similar conditions, are only modifications of the same process, differing in their virulence or place of development, seems to me highly probable. Durham expressed the same idea when writing about diffuse cellular laryngitis. He says :—"It is probably closely allied in nature to erysipelatous inflammation, from which, however, it differs, in the fact that in it the sub-mucous tissue is primarily attacked, and the mucous surface is left free, or only becomes secondarily affected. In erysipelas, on the other hand, the mucous surface is first affected, and the sub-mucous tissue is only secondarily or concomitantly involved." The course of these diseases and the circumstances under which they arise are so similar that the slight difference in their starting-point is not sufficient to make a separate classification of them necessary. In my judgment there is no more difference between them than between cutaneous and phlegmonous erysipelas.

It is hardly necessary to say that the prognosis is always grave, not only on account of the local troubles which may with most unexpected rapidity cause death, but also on account of the general conditions brought about by the disease. The most common cause is failure of the heart. To this I attribute death in my second and third cases. Œdema of the larynx may come on so rapidly that a fatal result may occur before there is time for the performance of tracheotomy. Extension of the disease to the lungs may set up a low form of pneumonia or pulmonary œdema, as in my first case ; or, lastly, the patient may die from general infection or cerebral complications.

The treatment which I have employed is the following :—The patient should be kept in bed in a room at a temperature of about 60° F. An ice collar should be applied to the neck, and he should have pellets of ice to suck. If the patient be seen early, and the disease be confined to the pharynx, m. 20 of Tinct. ferri perchlor., with the same amount of glycerine, in water, may be given every three or four hours. If, however, the larynx is implicated, and there is any tendency to attacks of spasmodic dyspnœa, 10 to 20 grains of bromide of potassium should be administered instead of the iron mixture, to diminish the tendency to spasm of the glottis. If, in spite of this treatment, the symptoms of laryngeal stenosis increase, the pharynx and larynx may be painted with a 20 per cent. solution of the hydrochlorate of cocaine. This was done in my last case, and the relief obtained was marked and immediate. The first effect of the cocaine is usually to cause a profuse secretion of mucus and saliva, and then there is a notable diminution in the bulk of the swollen parts. I first tried the application of cocaine in cases of quinsy, and the results I obtained were so satisfactory that I read a paper on the subject before the Clinical Society in May, 1888. Since then I have repeatedly used it in similar cases, and always with good effect, the patients invariably stating that the relief thereby afforded was most marked. In some cases, moreover, the cocaine seemed to prevent the tonsillitis going on to suppuration. These excellent results induced me to try the application of cocaine in

cases of erysipelatous pharyngitis and laryngitis, and I have been more than satisfied with the effect. In two or three cases of œdema of the larynx, in which scarification or tracheotomy seemed inevitable, painting the swollen parts with cocaine has caused such a diminution in their size that respiration has been rendered comparatively easy.

Energetic counter-irritation, by means of sinapisms to the throat, chest, back and shoulder blades, has been suggested as a means of determining the erysipelas to the surface. Dr. Bedford Brown gives the history of two remarkable cases in which the free application of sinapisms was followed by immediate relief to the symptoms of laryngeal stenosis, and I certainly intend to try sinapisms in future.

Dr. Helbing, of Nuremburg, advocates a similar plan of treatment in phlegmonous pharyngitis. He applies three or four drops of croton oil over the skin, between the angle of the jaw and the larynx, and he claims to have obtained speedy relief from this procedure.

The question of tracheotomy will of course have to be considered in these cases, and if death threatens from obstruction to the respiration it is clearly the duty of the surgeon to obviate the tendency to death by opening the windpipe. In this respect I agree with Cohen, who says: "In presence of asphyxia or excessive dyspnœa tracheotomy is recommended by Ryland, Moss and Gibbs, but it is unhesitatingly condemned by Porter of Dublin, and my own researches into the records of cases have not disclosed a single instance in which life has been saved by its agency. Be it even so, I would recommend tracheotomy nevertheless, if not for the one chance more it offers to life, at least for the relief it affords the patient. In this case the operation changed the condition of the patient from one of restless, gasping agony to that of tranquil repose, and gave him a few peaceful hours in which to prepare to meet his God." This description exactly applies to my third case, and though the patient died, the relief from the operation was so immediate and complete that there is no need to say anything further in justification of the operation.

In view of the unsatisfactory results of tracheotomy, the adherents of intubation have put forward a claim for it in the relief of the dyspnœa of laryngeal erysipelas. I do not believe for a moment that intubation is possible except in very limited cases. Porter, however, regards intubation as preferable to tracheotomy. Merrigan records a case in which intubation was attempted and the tube retained for a time. It was, however, coughed up, and could not be replaced on account of the laryngeal swelling. In the great majority of cases the œdema comes on so rapidly that it would be impossible to introduce a tube into the larynx. In all the cases I have seen the glottis has been almost entirely obscured by the greatly swollen epiglottis. The food should be given in a liquid form, and in one case in which dysphagia was a marked feature I fed the patient by the bowel with excellent results. Stimulants are usually necessary. I have not seen much benefit from internal medication, but salicylate of soda has been recommended to reduce the temperature, and lessen the tendency to cerebral complications. If, as in the case which I have related, there is hyperpyrexia, sponging the patient or packing in ice may be required.

SECTION OF SURGERY.

(WE are indebted to Mr. LENNOX BROWNE for the following interesting and critical account of the discussion on "The present position of Intra-Nasal Surgery," at the recent meeting of the British Medical Association. We sympathize with our correspondent in a regret which he expresses, that, through more or less unavoidable causes, the burden of defence should have fallen on him, and that on this account the report is much more personal to himself than he could have wished.)

THERE was no section at this meeting devoted to either Laryngology, Rhinology, or Otology. The omission was not to be deplored, and we, indeed, hope it may continue; for with a Laryngological Association, and a triennial International Medical Congress, we are of opinion that as these sections are attended so sparsely, and only by specialists, it is preferable to bring these questions before the general body of members at the annual meeting, if we are to have the advantage of the mutual criticism and improvement of specialists and generalists.

The only feature of interest to this Journal at the meeting was the discussion on the present position of intra-nasal surgery, a subject which had been placed on the programme through the influence of some leading rhinologists, in the knowledge that the practice of specialists had been much animadverted on in secret councils.

Reserving our abstract of the reports, we may observe that the subject was opened by Mr. WALSHAM, who, of all general surgeons, may be said to be the best informed, and the most liberal in his views of this speciality. Not much fault could be found with his address, except a certain vagueness, due to a possible desire to "run with the hare and hunt with the hounds." Not omitting to name anything that is claimed by rhinologists as to the influence of nasal disease on the health of more or less distant organs, he, rather by inference than by direct impeachment, questioned the far-extending benefit of intra-nasal surgical procedure, on the ground that sufficient evidence was wanting as to the conclusiveness of cause and effect.

He *more suo* adversely referred to Dr. Woakes' views by using the term "so-called necrosing ethmoiditis," and made some remarks of a general nature as to disease of the accessory cavities.

Mr. LENNOX BROWNE followed by "clinical observations explaining and justifying the present position of intra-nasal surgery." Referring to the ignorance of intra-nasal disorders which prevailed up to recent times, and the enormous strides made by the recognition of such conditions as adenoid growths, empyema of the accessory cavities, intra-nasal spurs and exostoses, and the more scientific operations upon nasal polypi, this speaker then enumerated and briefly narrated cases illustrative of the various conditions which may be held responsible for nasal disease, such as (1) the beneficial effect of cauterizing swollen turbinates with chromic acid, previously shrunk by cocaine, in cases of acute laryngitis

bronchitis, and even pneumonia; (2) the influence of stenosis as an etiological factor of laryngeal growth. He also referred to his own cases of arrest of persistent recurrence of laryngeal polypi in children after removal of adenoids, and explained that these cases were parallel points with the increasing number of recorded cases of spontaneous disappearance of laryngeal growths following tracheotomy.

Regarding spasm of the larynx, he contended that in adults this condition was often a direct result of atrophic rhinitis, and due to an over-patency of the nasal respiratory passage, as well as to a destruction of the ciliae. Asthma and hay-asthma might be caused directly by mouth-breathing where the nostril was much obstructed, or they might be due to reflex. Children the subject of laryngismus stridulus were, in his opinion, invariably the subject of adenoids, removal of which was almost always followed by immunity from further attacks. He differed also from Mr. Walsham, who doubted the value of intra-nasal operations in cases of deafness, and, though he admitted that chronic middle-ear catarrh was, when established, seldom by any means entirely cured, he quoted instances of unusual benefit by removal of "spurs."

Having referred to the advance in intra-nasal medication, the result of improved intra-nasal surgery, and the diminution of disfiguring extra-nasal operations by those who carefully inspected and operated internally, he lastly considered very candidly the vital risks of the operation, and stated that he believed them to be far less serious than under the old school practice of the surgeon who worked in the dark. Having first premised that he limited his own surgical procedure to the eradication of polypi, the use of the cautery (electrical and chemical) and the removal of "spurs" by saw and trephine, he frankly referred to one case in his own practice which had been made a lever for much opposition to this branch of surgery. He took now the first public opportunity of stating that the only death which had occurred in his own practice was that of a well-known and much-esteemed member of the profession, who, contrary to advice, had not rested after application of the galvano-cautery to the throat and nose, but had pursued his work, which lay in a most septic department, and had developed a meningitis which, unfortunately, proved fatal.

Four other papers, the titles of which were included in the programme, remained unread in the absence of the authors.

Afterwards followed a paper by Dr. WOAKES on "Necrosing Ethmoiditis," which gave the key to the very moderate discussion which ensued. This physician showed a number of specimens of turbinal bodies removed from living patients diagnosed as suffering from this disease, a histological report by Dr. Sidney Martin, and a series of beautiful pencil drawings on the block of that gentleman's sections. These Dr. Woakes opined would be definitely convincing of his thesis, but Dr. WILLIAM HILL very promptly pointed out that in only two out of the twenty specimens had there been any actual disintegration of bone. In reply to a question as to whether, in his opinion, necrosing ethmoiditis was to be found in every case of polypus, Dr. Woakes answered in the affirmative; but a further question as to whether necrosing ethmoiditis was responsible

for any other disease of the nose, failed to elicit a definite reply, and Dr. Hill therefore, not unfairly, considered that in eighteen out of the twenty cases the turbinal body had been removed with insufficient evidence of the disease of which it was asserted to be the victim.

Mr. LENNIX BROWNE, further speaking on this question, expressed admiration for the industry and perseverance of Dr. Woakes' work, but suggested that his arguments were based on a *petitio principii* for admitting the first four conditions claimed by Dr. Woakes as preliminaries of the necrosis—viz. :—thickening of the mucous membrane, development of myxoma, and even fibrosis of the arteries, and the presence of cysts in the spongy bones. He contended that neither on histological grounds nor by clinical facts had Dr. Woakes given satisfactory evidence of a truly necrotic degeneration. Indeed, the two chief clinical evidences of caries were entirely wanting in cases of ordinary polypus, viz., the stench of dead bone, or the spontaneous extrusion of bony fragments—even in cases of polypus of thirty or forty years' standing. He did not deny that there was not such a disease as necrosing ethmoiditis, but he claimed, in common with other rhinologists, that it was rare and that it always depended on a specific dyscrasia, probably the syphilitic, and that he would in such cases persevere with iodide of potassium before he would think of removing even a portion, much less the whole, of so important a physiological structure as the middle turbinal body.

Dr. WOAKES' reply to Dr. Hill cannot but be regarded as unsatisfactory. In the first place he contended that the term "necrosing ethmoiditis" did not imply that necrosis was present in every case, but only that there was an inflammation of the ethmoid which would, if left alone, lead to necrosis, a reply which must be considered as representing a serious climbing down from a position believed by almost every rhinologist, except himself, as untenable; for, as a general surgeon who was present—but who, unfortunately, did not speak—afterwards remarked, the term "necrosing ethmoiditis" ought to be considered as indicating a pathological condition analogous to that of a gangrenous inflammation. Not more satisfactory was his assertion that the reason of the absence of stench, and the non-extrusion of bone, was that the bone degeneration took place within the mucous covering, and was of the character of a crumbling down; such an explanation being quite contradictory of one of his points of diagnosis, viz., that with a probe rough deadened bone, denuded of periosteum, can be almost invariably detected.

We should not omit to allude to a useful paper by Dr. DONALD STEWART, on the necessity for a more accurate differential diagnosis of empyema of the accessory cavities, and the means by which they might be attained. Dr. Stewart justly twitted Mr. Walsham for a remark that it did not matter much whether purulent discharge came from the ethmoidal or sphenoidal sinus. The paper elicited a general opinion as to the slight diagnostic value of buccal illumination of the antrum in cases of empyema, for the three reasons that the two antra vary much in size and thickness of osseous wall even in the same subject, and that omitting this there is no means of diagnosing by illumination between an accumulation of fluid or the presence of a solid growth.

Altogether, scant as the discussion was, it will not have been without service, inasmuch as it proved that the large number of general surgeons present had nothing to say adverse to intra-nasal surgery as practised by specialists. Possibly more might have been said had Mr. Walsham printed a syllabus of the particular points to be taken up by him, and we trust that some such arrangement may in the future be recommended by the Council to all the readers of opening papers for special discussions. But the main outcome of this meeting is that Dr. Woakes' latest contribution, which was avowedly made to convince his opponents as to the almost universal presence of necrosing ethmoiditis in every form of hypertrophic rhinitis, so far from having that effect, plainly tended to prove their untenability. We would even venture to hope that the criticism which his views received at Bournemouth may help to convert the author of them to a sense of their incorrectness.

REVIEWS.

Parker, R. W.—*Diphtheria: its Nature and Treatment.* Third Edition. largely re-written, pp. 184. London: H. K. Lewis. 1891.

WHEN a book has entered upon its third edition it may almost be said to be beyond criticism. The work before us is familiar enough to us all by the two previous editions, as the record of the practical experience of a well-known surgeon qualified particularly to treat of these subjects. The third edition differs somewhat from the previous ones, the chapters on diphtheria having been entirely re-written to support the following contentions—"Diphtheria is a purely local disease in its initial stages, "very largely in its subsequent stages, and the constitutional symptoms "are secondary to the local lesion." Treatment is therefore directed to the controlling of the local lesion, and removing and sterilizing the morbid products of this lesion as rapidly and efficiently as possible. The author, of course, adopts the bacillary theory of the origin of diphtheria, and does not believe in the possibility of the disease arising *de novo*. Though one attack of diphtheria does not protect the patient from another, the author thinks that more or less protection or immunity is gained in the majority of cases. At the close of a fairly good chapter upon the clinical characters of diphtheria, the author rightly insists upon the impossibility of making an accurate diagnosis at first in many cases of obscure "sore throat." "The chief clinical lesson to be "learnt is the value of strict *isolation and of precautionary measures* in "cases of doubtful nature occurring among young people, in whom "diphtheria and other zymotic diseases are most prevalent." We could have wished that the author had warned his readers more especially of the difficulty of diagnosing many cases of what appear to be "follicular

tonsillitis" from diphtheria with punctate membrane. So great is this resemblance at times, and so difficult is the diagnosis, that we have long maintained that all cases of follicular disease of the tonsil in the young adult should be isolated, at any rate for a brief space of time, until the diagnosis is certain, and in this advice to isolate young persons with sore throat we cordially agree with the author. We think also that sufficient stress is not laid upon the fact that the so-called membrane is very frequently no membrane at all, but a soft pultaceous mass of slightly adherent matter. It is an error to perpetuate the older mistaken notion of a diagnostic "kid-like" or "wash-leather" membrane. The author does not uphold the theory of a "peripheral neuritis" as explanatory of the paralysis of diphtheria, accepting Mendel's view of vascular change, and not merely neuritis.

As to treatment, the author's pathological views compel him to place most reliance upon local treatment. Hence we find him advocating the use of strong hydrochloric acid, which can be applied fuming three or four times in twenty-four hours. The author, however, dilutes it with twice its bulk of glycerine. He also swabs out the pharynx frequently with glycerine of boric acid, or of carbolic acid, or ten per cent. of resorcin in glycerine and water. Insufflations of boric acid (two parts) and iodoform (one part), after swabbing, are also recommended. In nasal diphtheria the nasal irrigator must be employed, using the previously-mentioned drugs diluted, even anæsthetizing the child so as to thoroughly remove the discharge. Steam sprays of carbolic acid (two per cent.), corrosive sublimate (1:1000), or sulphurous acid are recommended. According to the author, success depends more upon the way in which the infective products are got rid of, than upon the particular drug used. He speaks favourably, though with but little experience, of mercury in diphtheria. Some very useful directions are given as to preventive measures. Over one hundred pages of the book are taken up with chapters upon tracheotomy in diphtheria, its after-treatment, complications, and intubation, and many illustrative cases are given, which add to the value of these chapters. We can only recommend that they be read in the original. They deal with matters which the author is as competent to treat as anyone, and contain much information and instruction of great value. Altogether, we may say of this book, that it cannot fail to be of immense use to the general practitioner, and that the author has placed clearly before his readers an excellent *résumé* of the treatment of diphtheria on general lines, with special reference to tracheotomy, its difficulties and dangers.

R. Norris Wolfenden.

Ball, J. B.—*Intubation of the Larynx.* Pp. 54. London: H. K. Lewis.

THIS is a reprint, with additions, of a paper published in the "Illustrated Medical News" in 1889. It gives a very fair review of the subject, from Bouchut to O'Dwyer. A description of the instruments and of the method of performing the operation, and of the precautions necessary after operation, is given. Though the book contains nothing new, it may be useful to the busy practitioner whose time does not permit of the reading of periodical literature.

R. Norris Wolfenden.

Transactions of the American Laryngological Association. Twelfth Annual Meeting. New York. 1891.

THIS book of 131 pages testifies to the activity of this almost venerable and honourable association. It contains seventeen original papers and the discussions thereon. Many of these are of extreme interest, and amongst so much that is excellent it would be invidious to particularize. We note that the association is in a flourishing financial condition. A melancholy appendix to the volume is a short but sympathetic obituary of Dr. Hosmer Allen Johnson, who died in February of this year. He was one of the original members of the association. These Transactions must, it is almost needless to say, be found on the shelves of all who possess a library of laryngological literature. *R. Norris Wolfenden.*

Hare, H. A.—*Fever; its Pathology and Treatment by Antipyretics.* Pp. 166. Philadelphia and London: F. A. Davis. 1891.

THIS essay, which was awarded the Boylston Prize of Harvard University in 1890, is republished as "No. 10 in the Physicians and Students' Ready Reference Series" of the enterprising firm of F. A. Davis. It deals successively with antipyrin, antifebrin, thallin, phenacetine, salicylic acid and its compounds, and cold bathing. The author's conclusions are that antipyrin stands to-day foremost in the ranks of antipyretics, antifebrin next, phenacetine probably next, and thallin last, in the reduction of fever. As to pain, antipyrin is *facile princeps*; phenacetine equal with antifebrin, and more safe, and thallin is without any controlling power over pain. The salicylates still hold their place as antipyretics in rheumatism. Cold sponging is the antipyretic remedy *par excellence*, but should be used intelligently. Justly remarks the author, "The greatest enemies of antipyretic treatment are its friends, who in their enthusiasm often fail to use discretion, and employ the measure to excess, or without regard to the indications really at hand."

This book is not merely a compilation of other men's ideas, but is based upon original experiments, which are herein recorded. Thus, in the chapter on antipyrin a great amount of experimental work is recorded, illustrated by excellent tracings. The action of the drug on heat functions, calorimetry, circulation, influence on the blood, tissue metabolism, nervous system and respiration, its method of elimination, toxic effects, and antiseptic action, are successively and fully studied. The clinical evidence of antipyrin is dealt with afterwards in considerable detail. One hundred cases are recorded in detail in which antipyrin has had some "untoward effect," in six of which death occurred. Critical examination of these cases leads to the conclusion that in ordinary cases, although the symptoms of the untoward effects of antipyrin may be alarming, they so rarely end in death that we may rid ourselves of any fear. It is mostly in typhoid fever, with a system already depressed, that these alarming symptoms have been met with.

The antipyretic effects of antipyrin is said by Reihlen to be most powerful in tuberculous diseases, and the same experimenter asserts that when the action of antipyrin is associated with a spontaneous fall of

temperature, as at a crisis, the resulting reduction of body heat is colossal, and collapse often ensues. Unless the amount of antipyrin reaches twenty-five or thirty grains it is said to lack the power of lowering the temperature before the disease reaches the pyrexial acme. The effect of antipyrin as a reliever of pain is referred to at length.

The other drugs mentioned are treated according to the same plan, and with the same detail. It is surprising what an amount of experimental and clinical information is compressed into this small book. Messrs. Davis could not have included in their series of reference hand-books any more useful essay than this, nor could they have possibly found any author who could so successfully have vivified the dry bones of experimental research and produced a book of more value to the practitioner who follows his profession with respect for experimental therapeutics.

R. Norris Wolfenden.

De l'Empyème Latent de l'Antre d'Highmore ('Latent Empyema of the Antrum of Highmore.') Dr. J. MARCEL JEANTY. Bordeaux: Feret et Fils. 1891.

THE applicability of the term "latent" to the cases under consideration is obviously only relatively justifiable, because what is latent to one observer is quite obvious to another; and to those who habitually investigate cases of disease of the accessory, as well as the main cavities of the nose, the latency of the condition in many of the examples quoted would be most unlikely. We do not think that the adopter of the term means to reproach his *confrères* with failing to recognise empyema of the antrum, because the "classical" symptoms are absent, but such are the cases that he includes under the term "latent"—obviously by far the majority.

The *raison d'être* of the work is to lay before the profession the great value of puncture and irrigation (for exploratory purposes only) through the inner wall of the antrum, at the level of the inferior meatus, as proved by the experience of Dr. Lichtwitz, of Bordeaux. The method is compared very impartially with the other methods of confirmatory diagnosis, such as puncture with aspiration, irrigation through the natural opening, perforation (exploratory) through the alveolus of an extracted tooth, transillumination, &c., as regards ease, certainty, and safety, and we venture to think that most readers will find the author's facts and arguments pretty convincing. The directions are as follows:—"After a nasal "injection of warm salt water or boracic lotion, the external wall of the "nasal fossa is to be cocaineized at the level of the inferior meatus. There "is then to be introduced through a bivalve speculum a trochar, of "which the point is withdrawn within its steel sheath, as far as the middle "of the inferior meatus, the anterior extremity being directed obliquely "upwards and outwards underneath the inferior turbinated body. After "having fixed the trochar against the point where it is desired to "perforate—about three or four centimètres from the nasal spine—the "stylet is protruded from the sheath, and the trochar is driven through the "wall, which separates the antrum of Highmore from the nasal fossa.

"... The puncture being effected, it only remains to adapt a syringe "to the canula, directly or by means of an india-rubber tube, and to irrigate the antrum with warm water." In the cases considered, there would be no fear of the fluid failing to escape by the natural orifice of the antrum, because if this orifice were blocked there would be present the "classical" symptoms (distension of the walls of the antrum, swelling of the cheek, &c.), and the empyema would not be "latent." The instrument employed is a straight trochar 10 to 12 centimètres (4 to 4½ inches) in length, and having a diameter of a millimètre and a quarter to a millimetre and a half. One circumstance only, the presence of a partition sub-dividing the antrum vertically or horizontally, may render this means of exploration nugatory, but this condition is so rare that it hardly detracts at all from the value of the method. The slightness of the operation will commend it to those prudent practitioners who scruple to order the extraction of a tooth in cases of doubt, and who are at the same time alive to the influence of "latent" empyema of the antrum as an element in the chronicity of nasal diseases. A case is quoted in which the various signs suggested the presence of this condition, but the negative result of the exploratory puncture saved the patient from an unnecessary operation. The writer insists on the methodical practice of this mode of exploration in all cases of nasal blenorrhœa of doubtful origin, with the assurance that many cases of latent empyema will thus be brought to light, and double empyema of the antra be found to be much more frequent than is generally supposed.

As regards treatment, the author's verdict is overwhelmingly in favour of the so-called method originally credited to Cooper—drainage and irrigation of the antrum by an opening made through a tooth socket—as now usually performed. In cases where the presence of a foreign body or contained tooth is suspected, or when it is desirable to scrape the interior of the antrum, he recommends sub-periosteal trepanation or drilling of the facial surface of the superior maxilla in the canine fossa.

The work is obviously most conscientiously and candidly put together, no attempt being made to gloss over or conceal the less brilliant results; and, the cases being in many instances comparatively recent, we venture to believe that a postscript added at a later date would certainly contain a larger number of cures. A collection of completely narrated clinical histories is appended, illustrating the rough as well as the smooth, and showing how necessary it is for the operator to take an all-round view of each case, trying each on its own merits, and resorting to another method after one fails, whether as regards diagnosis or treatment. The *brochure* contains a history of the development of the study and treatment of empyema antri, with an alphabetical roll of authors who have written on the subject. In a list otherwise so exhaustive we should have expected a reference to the case published by Lennox Browne, and read before the Harveian Society in the relatively prehistoric period of 1879.

The work is in clear, easy French, and eminently readable.

Dundas Grant.

Kreidmann (Altona).—*Antibacilläre Ursache und Bekämpfung der Diphtheritis nebst einer Untersuchung über das Wesen und Wirken des Kochsche'r Heilmittels*, 36 pp. Boysen, Hamburg. ("Antibacillary Origin and Treatment of Diphtheria, and Researches on the Nature and the Effect of Koch's Medicament.")

A STRANGE little book, contrary in its conclusions to views commonly accepted, but written by an intelligent author of great experience, and who gives facts which are in every case of interest, even if we cannot agree always with his conclusions, and the insufficient methods of reaching them. He first deals with the irruption of epidemics of diphtheria in connection with the export of dung. He has twice observed this connection in little villages having no communication with other places, so that any other mode of infection could be excluded. He concludes, therefore, that the infectious poison of diphtheria is of gaseous nature, especially connected with putrescence. He believes that the micro-organisms found in such cases are only accidental. From this fact he also believes himself to have explained the reason why usually only little children are affected with diphtheria. Adolescents possess immunity from the repeated effects of small doses of the poison.

Of more doubtful value is the supposition that scarlatina is the antagonistic poison of diphtheria. The author thus concludes because cases of diphtheria of grave nature run a favourable course if scarlet fever suddenly arises.

The reporter has also observed two similar cases, but believes the explanation may be more reasonably found in the more deleterious nature of the true diphtheria than of diphtheria scarlatinosa.

Concerning the prophylaxis of diphtheria, we can agree with the author that careful cleansing of the mouth is certainly very good practice. As to treatment, he recommends gargling with bichlorate of soda, and the internal use of quinine and caffeine, with external application of ice. He believes that by this means, in most cases, tracheotomy will become unnecessary.

In an appendix, the author makes the strange remark that Koch's tuberculinum is the poison of scarlet fever, because both scarlet fever and tuberculinum are accompanied by similar symptoms, such as fever, exanthema, cardiac weakness, etc. He believes that persons who have had scarlet fever will show no reaction to tuberculinum. He therefore recommends, on the ground that scarlet fever is the antagonist of diphtheria, and tuberculinum is identical with scarlet fever, the application of injections of Koch's fluid in cases of diphtheria. We will, however, hope that nobody will follow this strange proposition, but we will also hope that the first part of the supposition, viz., the connection between the exportation of manure and diphtheria, may be proved. *Michael.*

Aphorisms in Applied Anatomy and Operative Surgery. By THOMAS COOKE, F.R.C.S. London: Longmans, Green & Co.

THIS is a convenient and useful compendium, including a good deal of "surface-marking" and a collection of examination questions of a more

than usually practical character, and admitting of less than usual of the "parrot-like" reply. It is interesting to note that the operation of ligature of the external carotid (important in connection with tonsillar hæmorrhage), has a prominence not usually accorded to it, and that in the description of tracheotomy the value of "a transverse cut along the lower border of the cricoid cartilage, so as to divide the fascia covering the trachea, which, with the veins may then be pushed down out of the way," is (although in small print) rightly pointed out. Anyone wishing to "keep up" his surgery would find this little work an interesting and valuable aid.

Dundas Grant.

Pollatschek (Karlsbad).—*Die Therapeutischen Leistungen des Jahr 1890.* Ein Jahrbuch für Prakt. Aerzte. 2e. Jahrgen. Hensers Verlag, Berlin. Leipzig, 1891. 214 pp. ("The Therapeutic Acquisitions of the year 1890." An annual for practical physicians. Second year.)

THIS book contains, with special reference to German authors, a good review of the therapeutical publications of the last year, and may be recommended to practitioners. As to laryngeal therapeutics, it contains very extensive articles—as for example—upon the application of aristol in diseases of the nose, pharynx, and larynx; the new publications upon menthol, nasal surgery, surgical treatment of laryngeal tuberculosis, and Koch's treatment, together with other shorter notices.

Michael.

NEW INSTRUMENTS AND INVENTIONS.

Improved Mouth-Gag.

MR. WYATT WINGRAVE, anæsthetist to the Central London Throat and Ear Hospital, has, through Messrs. Mayer and Meltzer, provided us with a mouth-gag, the excellence of which for throat work we have had ample experience. It is so small that it does not interfere with the face-piece of the ether-inhaler; it opens itself as the mouth opens and locks itself by "jamming" against reclosing. Of course it does not take the place of gags, like Ferguson's and others, for forcing open the mouth, but for preventing the mouth from closing it is most admirable, being practically self-retaining. It seems the perfection of mouth-props for use in operations on the throat under nitrous oxide or ether anæsthesia, for which it appears to have been particularly designed.

The Net of Health.

(Struthers and Company, Finsbury Pavement, London.)

CONCERNED as we are with the means which tend to counteract the causes of catarrh, and consequently enable us to take the first steps for its cure, we cannot but be interested in the material for underclothing desig-

nated the Net of Health. It is a small meshed open network of cotton, of light or of heavy wool, and consequently adapted for all skins and for all seasons. It answers the requirement postulated by Bosworth in the chapter on "Taking Cold," in his classical work on "Diseases of the Nose and Throat," being a "thoroughly porous and elastic fabric."

The writer of these observations can from personal experience testify to the extraordinary comfort attending the wearing of these materials. After active physical exercise, he has found his outer linen shirt in the usual state of dampness, while the net vest was perfectly dry. During the exertion the usual feeling of over-heatedness was apparently minimized, and the not uncommon after-chill conspicuous by its absence. When exposed to the air, while merely covered with this material, the writer has noticed all the peculiar freshness of the atmosphere, but beautifully tempered in its passage through the meshes of the garment. He considers this the nearest approach to the sensations of a hair-covered animal.

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THE HUMAN MOUTH AS A FOCUS OF
INFECTION.¹

By W. D. MILLER, Berlin.

DURING the last few years the conviction has grown continually stronger, among physicians as well as dentists, that the human mouth, as a gathering place and incubator of divers pathogenic germs, performs a most significant rôle in the production of various disorders of the body, and that many diseases whose origin is enveloped in mystery, if they could be traced to their source, would be found to have originated in the oral cavity.

It shall be my endeavour in the following pages (1) to call attention to the various diseases, both local and general, which have been found to result from the action of micro-organisms collected in the mouth, and to the various channels through which these germs or their waste products may obtain entrance to parts of the body adjacent to or remote from the mouth; (2) to present in very brief form the present condition of our knowledge of the pathogenic bacteria met with in the mouth, and the means at our command for combating them.

I shall refer only cursorily to subjects which are of minor importance, or which have already become familiar to the profession.

¹ Paper read at the Seventh International Congress of Hygiene and Demography.

I hope finally to be able to add some results of original investigations in this field which may help to establish the great importance of a thorough understanding on the part of the physician, no less than of the dentist, of the mouth germs as a factor in the production of diseases.

The subject will be presented under the three following heads:—

I.—Disturbances of the human body which have been traced to the action of germs growing in the mouth.

II.—The pathogenic mouth bacteria.

III.—Prophylactic measures.

I.—DISEASES OF THE HUMAN BODY WHICH HAVE BEEN TRACED TO THE ACTION OF MOUTH BACTERIA.

Decay of the teeth.—In conformity with the nearly unanimous verdict of all recent investigations, decay of the teeth must be regarded as the most widespread of all parasitic diseases to which the human body is subject, and although, as far as the life of the patient is concerned, the prognosis is exceedingly good, and decay of the teeth may be pronounced one of the most trivial disturbances of the human economy, yet, if we take into consideration the results which follow a case of general decay, particularly in the mouths of young or weak persons, it often becomes a disease of a very grave nature. I venture to say that most dentists will agree with me that the havoc wrought by dental caries in the mouths of vast numbers of children, or even adults, among the lower classes is a much more serious thing than an attack of chicken-pox, rubeola, or even measles. Among the more immediate results of caries of the teeth may be mentioned *diseases of the pulp and pericementum*; following these, *alveolar abscess*, which is produced by germs and their products passing from the root canal through the foramen apicale into the surrounding tissue. Primarily of a local character, it is very frequently accompanied by general symptoms of varying intensity, and sometimes attended by complications of a most serious nature, death from alveolar abscess being by no means as rare an event as is usually supposed.

Further complications of decay of the teeth are *ostitis*, *osteomyelitis*, *periostitis*, *necrosis*. Schede (Hamburger Krankenhaus) observed eight cases of osteomyelitis following extractions, all of which terminated fatally.

Koehler (Charité Annalen, Jahrg. XIV. and XV., 1888-89) observed in two years 44 cases of periostitis, partly from diseased teeth, partly following extractions. *Dental fistula*, "running sores," on the shoulder, neck, breast, and arm, have repeatedly been found to arise through diseased teeth.

Cases in which septicæmia, pyæmia, and meningitis resulted from diseased teeth or from operations in the mouth have been reported by scores. Two deaths from this source have recently occurred in Berlin.

Croupous pneumonia must be regarded as a disease in all probability closely dependent upon the condition of the mouth. The uniform

results obtained by the investigators on the subject of pneumonia for the last five years leave little room for doubt that the cause of this important disease is to be sought for in a species or group of micro-organisms which are constantly present in the sputum of persons suffering from pneumonia, and very frequently even in the saliva of quite healthy persons.

Furthermore, there is much reason in the arguments of Meltzer ("Ueber die mechanischen Verhältnisse bei der Entstehung der Pneumonie." *Med. Monatsschr.*, Feb. 1889), who claims that it is impossible for micro-organisms from the air to obtain direct entrance into the alveoli of the lungs through the air passages, with their numerous crooks and turns, but that they first lodge in the mouth or pharynx, from which they may, by a strong inspiration, be carried with particles of slime into the bronchioles, to be then finally driven into the alveoli through the pressure of the air in the bronchioles during the middle phase of the act of coughing.

This view is supported by the fact that, as shown by the investigations of Hildebrandt ("Beiträge zur Pathol., Anatomie u. Physiologie von Ziegler und Nauwerck," Bd. II., 1888, p. 143), the trachea, bronchi, &c., of animals contain no living germs. Hildebrandt, moreover, came to the conclusion, after a series of very careful experiments, that by far the greater part of the bacteria of the air lodge in the mouth, nose, and throat, and that, under ordinary circumstances, these cavities furnish an almost perfect filter for the air.

Again, it is highly improbable that the number of germs inhaled at any one time would be sufficiently great to maintain themselves in the human lungs without having undergone at least a temporary stay in the mouth, which serves as their recruiting or breeding place. Furthermore, the micrococcus of pneumonia not only does not proliferate at the ordinary temperature of the air, but, what is of still greater importance, soon loses its virulence when cultivated out of the body, even under the most favourable conditions, which is also another patent reason for the supposition that in pneumonia the mouth and not the air is the direct source of infection.

The infectious Angina (tonsillitis, amygdalitis infectiosa, &c.), with their severe complications, have been shown by the observations of Bouchard, Von Hoffmann, A. Fränkel, Fühlinger, Heutner, and Bahrát, Apolant, Leyden, &c., to be due to the localization of germs in the tonsils.

Writers on the subject of *Angina Ludovici* designate slight wounds or other breaks in the continuity of the mucous membrane, diseased teeth, the tonsils and salivary ducts, &c., as points of entrance for the specific germs of the disease, while the diseases of the maxillary sinus are known to owe their origin, in the great majority of cases, to diseased teeth.

Pneumococcus abscesses.—In this connection I call attention to the fact that the micrococci of sputum septicæmia, as shown by various authorities, possess invasive properties of the highest order, so that there is scarcely a part of the human body which may not fall a prey to their

action. I may mention here parotitis, multiple subcutaneous abscesses, tonsillitis, otitis media, abscesses of the mastoid process, peritonitis, and meningitis.

Of 203 cases of *actinomycosis* reported in the German medical literature of the last five years, the point of entrance was found to be in the region of the mouth and throat 120 times, not including the cases of actinomycosis of the intestines. In nine cases it was doubtful, and in the remaining 74 it was outside the mouth.

Most frequently carious teeth are brought into causal connection with the invasion, then wounds on the mucous membrane, colonization of the fungus in the tonsils, &c.

Noma, according to the observations of Schimmelbusch, Grawitz, and Loeffler, appears to be in some way dependent upon a specific bacterium in form of bacillus, which Schimmelbusch succeeded in cultivating.

We mention only furthermore (*pyorrhæa alveolaris*, swelling of the lymphatic glands of the lower jaw and neck, disturbances produced by the absorption of products of putrefaction or fermentation through the mucous membrane of the mouth, the *stomatitides*, *pharyngo-mycosis*, *stomato-mycosis*, *thrush*, and, of doubtful parasitic nature, *stomacæ*, *aphthæ* and *herpes labialis*.

Of infectious diseases of a general nature with localization in the mouth we mention *diphtheria*, *tuberculosis*, *syphilis*. We cannot here enter into a discussion of the question as to how far a neglected condition of the human mouth may tend to facilitate the spreading of these infections. Primary diphtheria of the mouth, as well as primary tuberculosis, have been repeatedly observed to originate about carious teeth.

I can mention but briefly only an epidemic of *stomatitis epidemica*—foot-and-mouth disease in man—in which no less than 6000 people suffered from this disease in a very severe form, some 40 cases ending fatally, and many more completely disabling the victims of the disease. It was communicated chiefly through drinking glasses (beer glasses). Dr. Siegel will soon furnish an extensive report of this very interesting matter.

Infections following operations in the mouth.—In recent years the demand for the adoption by dental surgeons of the same antiseptic measures observed by the general surgeon has constantly become more and more imperative. Attention has been repeatedly called to the fact that bloody operations in the mouth, such as tooth extractions—performed, as too many of them are, without the slightest regard to the principles of asepsis—often lead to infections of a serious nature which might have been easily avoided; not only that, but carelessness in regard to cleansing the instruments after every operation frequently results in the communication of disease from one individual to another.

Infections resulting from wounds with dental instruments.—Numerous cases have recently been brought to light in which slight wounds upon the hand, inflicted by instruments used in dental operations, also scratches of the finger on sharp roots, have resulted in infections of a most serious nature.

To the same category belong infections received through kisses, blows upon the teeth, bites, &c.

II.—THE PATHOGENIC MOUTH BACTERIA.

The investigations of different bacteriologists during the last five years have brought to light a great number of pathogenic micro-organisms, some of which occur in the mouth with considerable frequency, others having been met with but a few times.

Of those whose cultivation on artificial media has been accomplished, the following are the most important:—1, micrococcus of sputum septicæmia; 2, bacillus crassus sputigenus; 3, micrococcus tetragenus; 4, bacillus salivarius septicus; 5, streptococcus septo-pyæmicus; 6, micrococcus gingivæ pyogenes; 7, bacterium gingivæ pyogenes; 8, bacillus dentalis viridans; 9, bacillus pulpæ pyogenes; 10, the pyogenic micrococci; 11, actinomyces (ray-fungus); 12, saccharomyces albicans (thrush-fungus); 13, spirillum sputigenum; 14, Pane's pneumococcus; 15, bacillus saprogenes 1.; 16, streptococcus salivarius pyogenes; 17, coccus salivarius septicus; 18, micrococcus biskra; 19, bacillus bronchitides putridæ; 20, bacillus tussis convulsivæ; 21, bacillus pneumoniæ; 22, bacillus pneumo-septicus.

Besides these a number of pathogenic bacteria have been met with in the human mouth, whose cultivation on artificial media has not succeeded.

Finally, various other micro-organisms of great importance as exciters of disease appear to be able to maintain themselves for a considerable length of time in the oral cavity, viz., the micro-organisms of syphilis, tuberculosis, diphtheria, hydrophobia, &c.

Method of examining saliva for pathogenic organisms.—On account of the large number of different micro-organisms commonly found in the human mouth, it is, with a few exceptions, absolutely impossible to arrive at any conclusion regarding the presence or absence of any particular kind by a simple microscopic examination.

Cultures on agar-agar also often fail of their purpose, since many pathogenic mouth bacteria do not grow on this culture medium, or they grow so slowly that they are soon overgrown and hidden by the more proliferous saprophytes of the mouth. Gelatine is still less adapted to the purpose. We must consequently have recourse to the animal body for the purpose of isolating such pathogenic micro-organisms as may be present in the saliva at the time of the examination.

The person whose saliva was to be examined was always instructed to intermix the saliva, by rubbing with the tip of the tongue against the cheeks and gums, with dead epithelium and other films and deposits which are often clinging to the mucous membrane, and constantly carry enormous numbers of organisms. One or two of these drops were then injected into the abdominal cavity of a white mouse.

Of the 111 mice thus operated upon, 27 died within 15 hours; 22 in 15 to 24 hours; 18 in 24 to 48 hours; 8 in 2 to 4 days; 9 in 4 to 8 days; 13 in 8 to 20 days; 4 in 20 to 40 days; 10 being still healthy after the expiration of 30 days, were put down as having escaped infection;

though it is quite possible that one or the other of these 10, if kept longer under observation, would still have succumbed to the effects of the inoculation.

In nearly all cases where the mice died within five days, the cause of death was found to be acute peritonitis or blood-poisoning, or both combined, whereas in the great majority of cases where death did not occur till after five days, no micro-organisms were found in the blood, death being due to local suppurative processes alone. We may accordingly make two grand subdivisions of the pathogenic mouth bacteria. The first includes those which produce speedy death through blood-poisoning, with comparatively slight local reaction; the second, those which induce fatal pyogenic processes at the point of injection.

With very few exceptions, injections with the blood or peritoneal exudations of the deceased mice produced the same results as injections with saliva.

In the 111 examinations above recorded, capsulated cocci or diplococci, which according to present usage would be called micrococci of sputum septicæmia, were found in the blood of the mice 58 times, and apart from these cases three times in the peritoneal exudations, *i.e.*, in all 61 times.

Micrococcus tetragenus was found in all 26 times.

During the earlier experiments, my attention was directed solely to the micrococcus of sputum septicæmia, and I may have overlooked other organisms, so that in all probability the other species mentioned in reality occur still oftener than indicated by my figures. Accordingly, the micrococcus of sputum septicæmia occurred 61 times. *Micrococcus tetragenus* occurred 28 times. *Megacoccus buccalis muciferens* occurred 4 times. *Bacillus buccalis muciferens* occurred 3 times. *Bacillus buccalis septicus* occurred 6 times. *Bacillus pneumoniae* once.

Besides these, various other micro-organisms of pathogenic significance were met with (apart from the pyogenic ones), which I was not able to study more closely. Twice streptococci were found in the blood.

The Micrococci of Sputum Septicæmia.

From the time that Pasteur discovered a deadly micro-organism of the form of the figure 8 in the human saliva, up to the present, developments regarding the nature and significance of this organism have followed each other in rapid succession. Besides Pasteur, Raynaud and Lannelongue, Vulpian, Morgiggia and Marchiafava, Bochefontaine and Arthaud, Sternberg, Claxton, Gaglio and di Mattei, Griffin, Klein, A. Fränkel, myself, and, more recently, scores of others have furnished contributions to the subject of the toxic properties of the saliva.

A great impulse was given to the study of this subject by the discovery by A. Fränkel that croupous pneumonia is caused by a capsule-bearing micrococcus, identical with or the same as the micro-organism observed by Pasteur and those following him. This observation has been confirmed by Weichselbaum, Foa, Bordoni-Uffreduzzi, Netter, and so many others, that at present few doubt the etiological connection of the micrococcus of sputum septicæmia with croupous pneumonia.

The presence of small cocci or diplococci surrounded by a capsule or

halo in microscopic preparations from the sputum is also pretty generally accepted as a means of diagnosing croupous pneumonia in doubtful cases.

It is, however, a fact that capsule cocci have been repeatedly found in connection with a large number of different processes accompanying or independent of pneumonia. Thus, almost invariably in the emphysema of pneumonia, in pleuritis, endometritis, diphtheritis, peritonitis, pericarditis, and endocarditis, in cerebro-spinal meningitis, serositis exudativa, otitis media, abscesses of the mastoid process, retro-pharyngeal abscesses, ozæna, rhinitis, coryza, catarrh, &c.

Foa and Bordini-Uffreduzzi even give expression to the possibility that the capsule coccus may be the cause of the rheumatic diseases.

In my investigations I have met with four different species of micrococci, all of which answer to the description of the micrococcus of sputum septicæmia, but show certain differences in form and growth which justify doubts as to their identity.

For the purpose of description only, I call them micrococcus of sputum septicæmia I., II., III., and IV.

Micrococcus of Sputum Septicæmia I.

This micro-organism proved to be identical with the pneumococcus Fränkel, of which Dr. Lehmann, assistant of Professor Fränkel, kindly furnished me a culture from a case of meningitis. Like the other members of this group it grows best on blood serum, forming slimy semi-transparent colonies about the size of the head of a pin, which by transmitted light bear a certain resemblance to minute drops of dew. Where the colonies flow together, along the track of the needle, they form a ridge with slightly elevated margins, which attains its maximum growth in one to two days.

On agar-agar it sometimes fails to grow altogether; at others it grows nearly as well as on blood serum, depending upon some slight difference or other in the constitution or reaction of the medium. On agar it forms in line cultures very small blue-grey semi-transparent colonies, which, where numerous enough to flow together, form a more grey opaque growth. Colonies beneath the surface of the agar are grey-brown to yellow-brown, roundish, oval, or pointed, with irregular margins and thick black outline, which, however, is sometimes wanting.

Under a power of 200 to 250 diameters these colonies appear coarse, granular. Surface colonies under 50 to 75 diameters appear round, thin, slightly yellowish-grey towards the middle, colourless at the margins, which are slightly indented or uneven. The surface of the colony frequently presents numerous roundish vacuoles, better seen with a higher power, which give the colony somewhat the appearance of a tissue. A power of 200 diameters readily shows diplococci singly or in two's at the margin of the colony. No growth occurs on gelatine under ordinary conditions. In the blood and tissues the diplococci are invariably surrounded by a halo; staining in the ordinary methods for capsules usually reveals a capsule. The diplococci are distinctly elongated, more or less pointed, and often present the appearance of bacilli. They may

vary considerably in size in different tissues, and in different cultures.

On agar-agar the elongated form of the cells is particularly pronounced.

Mice injected with the blood or fresh cultures in the abdominal cavity die in about 15 hours; injected subcutaneously, in about 24 hours; vaccinated in a skin pocket at the root of the tail, in 36 hours to 5 days; occasionally they survive the infection. Rabbits and guinea-pigs are likewise susceptible, dogs immune.

The symptoms are too well known to require description. The micro-organisms are found in the blood and all the organs. The lungs often present a dark red appearance *in toto*, or only in circumscribed portions; at other times they are ash-grey. Occasionally, appearances are present indicative of a beginning hepatization. The skin is almost invariably cyanotic.

Micrococcus of Sputum Septicæmia II.

It grows under the same conditions as I., but the growth is usually more extensive. On blood serum it forms a grey, slimy, semi-transparent growth, presenting much more nearly the dewdrop appearance than I. Confluent colonies often form masses $1\frac{1}{2}$ to 2 mm. in height.

On agar-agar the colonies are seen (under a power of 100 to 200 diameters) to be made up of long threads of cocci and diplococci; the vacuoles present in I. are here wanting. Characteristic for this species is the formation of capsules on artificial media (blood serum as well as agar-agar), the constant presence of long chains, and the sliminess of the growths on agar, as well as in the peritoneal exudations of animals infected with this organism.

The cocci and diplococci in the blood, as well as in the cultures, are also usually less pointed than those of I.; in fact, they sometimes appear quite round.

The hyperæmia of the lungs and cyanosis are wanting.

Micrococcus of Sputum Septicæmia III.

This organism presents many points of similarity with I., but sufficient differences to entitle it, in my judgment, to be considered as a separate though nearly allied species. On agar its colonies present an entirely different appearance from those of I.; the vacuoles are missing, and the surface appears as if made up of innumerable small hexagons, producing a certain resemblance to *pleurosigma angulatum*. The cells, both in the blood and tissues of animals, as well as on artificial media, are more plump and rounded than those of I.; there are also slight macroscopic differences in the growths of I. and III. In other points they do not present differences requiring particular mention.

Micrococcus of Sputum Septicæmia IV.

It will be seen that it is long and pointed, but much smaller than I. This difference alone would, of course, not justify the conclusion that it is not the same as I. My reasons for looking upon this organism as a distinct species are to be found in its action upon mice. I have met with

it but once during my investigations. The mice vaccinated with the saliva containing it died inside of 24 hours, and mice vaccinated with the blood of these died inside of 30 hours. The next generation of mice did not succumb till after five days, then followed nine days, while all subsequent vaccinations turned out negatively. In other words, the virulence of the micro-organism rapidly decreased on passing it through the body of mice. In this respect micrococcus of sputum septicæmia IV. differs so decidedly from the other micro-organisms of the group as to justify making an independent species of it. I think there is no doubt about I., II., and IV. constituting separate species, but as to whether the differences noted between III. and I. are sufficiently marked and constant to entitle the former to an independent position, opinions will probably differ.

The different species above described present so many points of similarity, and withal are so subject to slight variations in form and growth, that the question of differentiating between them becomes exceedingly difficult.

I am unable to say whether the forms II., III., and IV. have any connection with croupous pneumonia and its sequels. Banti ("Arch. di Anat. Norm. e Patol.," 1890, Vol. I.; abstract in "Centralbl. für Klin. Med.," 1891, No. 18) describes four species of nearly allied micrococci, all of which are capable of exciting pneumonia. Banti has named them diplococcus pneumoniae I., II., III., and IV. Foa ("Deutsche Med. Woch.," 1889, No. 2) also inclines to the view that there are at least two species of pneumococci.

Megacoccus Buccalis Muciferens.

I have given this name to a micro-organism which I found four times in the blood, in the form of thick, short rods, surrounded by a capsule or halo, while on artificial media the predominating form is the coccus. It grows well on the ordinary media, on agar-agar, very rapidly forming a semi-transparent slimy paste, very much like starch.

Ridges, 6 to 8 millimètres wide, and 1 to 2 millimètres high, may be formed in 24 hours.

In dilution cultures on gelatine it appears in 40 hours as dark-grey colonies, almost or quite round, distinctly granular, as if made up of an infinite number of little spheres or mosaics. Each colony also shows a number of bright shining spots on the surface. On potato it appears in 24 hours as a greyish-white moist growth, with indented border.

In three to four days the growth takes on a yellowish colour, and appears semi-transparent while retaining its moist surface.

In cultures on agar-agar, in particular, the separate cells are surrounded by thick capsules or sheaths, which give to the cultures their slimy nature. The slime dissolves very slowly in most of the ordinary solvents. Weak solutions of alkalies and acids, also solutions of peroxide of hydrogen, slowly disintegrate the mass without apparently dissolving it. Glycerine in one case cleared it up, in another case not (the culture in the former case was 24 hours old, in the latter four days). It is precipitated or coagulated by alcohol and five per cent. solutions of bichloride of

mercury ; slowly dissolved by one per cent. solution of caustic potash ; two per cent. leaves a flaky precipitate. The insolubility of the sheaths renders the divitalization of the cocci by ordinary means very difficult.

Mice infected with the micro-organism in the abdominal cavity die in 15 to 30 hours with varying numbers of bacilli or cocci in the blood and all the organs. In the peritoneal cavity slimy exudations mixed with pus corpuscles and vast numbers of bacilli ; spleen much enlarged ; jelly-like exudation as large as a shilling at the point of injection. Subcutaneous injections cause death in one to three days. Guinea-pigs likewise susceptible ; rabbits not sufficiently tested.

Bacillus Buccalis Muciferens.

This organism was found in the blood three times. It bears a close resemblance to the foregoing species, though it is undoubtedly distinct. In the blood, as well as in cultures on artificial media, it occurs in form of thick bacilli, occasionally growing out into threads.

In the former situation, as well as on agar-agar, or blood serum, it is provided with a sheath, which readily takes on staining matters. It grows exceedingly well on the ordinary media. In agar it forms a paste similar to megacoccus buccalis muciferens, which is, however, distinctly less viscid ; it also grows somewhat more rapidly than megacoccus buccalis muciferens, and has a milkish grey-white colour by transmitted light in contradistinction to the bluish colour of megacoccus buccalis muciferens.

Cultures in bouillon develop rapidly, and, on shaking, send up a shower of minute bubbles, which continue to ascend for half to one minute, and form a foam on the surface. In this respect it again differs from the foregoing species. On gelatine the colonies appear in 40 hours as very dark, perfectly round, dense granular bodies, with sharp outline ; under high power they look like mosaic-work.

On potato, extensive growth in 24 hours, cream-coloured, and moist in the middle, drier and strongly indented towards the border, and in colour scarcely to be distinguished from the potato. In 48 hours beautiful growth, margins indented and raised ; after three or four days opaque, slimy, dirty growth.

The paste formed by growths on agar dissolves slowly in three per cent. peroxide of hydrogen ; less slowly in weak alkalies.

The cells possess no motion. Spores not observed. Multiplication only by fission. Stain readily, but lose colour after treatment with Gram's method.

Bacillus buccalis muciferens is pathogenic for mice, guinea-pigs, and rabbits (other animals not tested). Symptoms similar to those produced by megacoccus buccalis muciferens. The micro-organisms are found in large numbers in the blood and organs, extensive fibrous exudation and œdema at point of injection, tumour of spleen, &c.

Bacillus Pneumoniæ (Pneumo-bacillus), more commonly known as micrococcus pneumoniae (Friedländer), need not be described at length, since it may be found in different works on bacteriology, which must be in the hands of most dentists and physicians. It is intensely pathogenic

for mice ; rabbits are immune. There is a certain resemblance in shape and size between the cells of the pneumococcus and the pneumo-bacillus. It is to me, however, inexplicable how anyone could for that reason pronounce the two species identical, while the one (pneumo-bacillus) grows readily on gelatine, the other not at all.

Bacillus Buccalis Septicus.—In six cases out of the 111 the presence of this micro-organism was established by inoculation, as well as by pure culture. In other cases a bacillus was found which in shape and colour reaction appeared identical with it, though its identity was not really established by the appropriate tests. Besides this, the bacillus in question was found in the pus of an abscess resulting from a wound by a dental instrument.

It occurs in form of rods, often slightly pointed at the extremities, sometimes growing out into long threads. It has no forward or backward motion, but a rotatory movement about an axis vertical to its length. It grows well on ordinary culture media, even at room temperature, better still at 30° to 37° C.

On gelatine it forms in two days round or nearly round colonies, with not quite clearly defined margins, homogeneous, or very slightly granular, grey or faintly yellowish-grey. Surface colonies are very thin, bluish, traversed by numerous cracks or fissures, margins indented. In line cultures it grows rapidly, forming beautiful indented velvety greyish-white ridges. On agar-agar the colonies develop rapidly, attaining a diameter of 1 to 2 mm. in 24 hours.

On potato, moderate development in 24 hours, centre moist and grey, border dry, indented, visible only on close observation. In 48 hours the growth is distinctly visible, borders raised and clearly defined. In 72 hours moist, thick growth, viscid dirty yellow with a tinge of pink.

On blood serum it forms ridges 1 to 1½ mm. wide and ½ mm. high of slightly yellowish-white colour. Young cells stain readily, old ones with great difficulty. Often certain zones or points of the rods remain unstained.

Three rabbits were injected with 0·5 cc. of a pure culture in bouillon, one in the abdominal cavity, one intravenous, and one subcutaneously. The first was dead in 15 hours ; the second in 35 ; the third in 45 hours, with symptoms of acute septicæmia, large numbers of bacilli in the blood and in the organs, spleen tumour, &c.

White mice and guinea-pigs were likewise susceptible.

Cultures on artificial media soon lost their virulence.

The loss of virulence of the Sputum Cocci.—Most observers agree that the micrococci of sputum septicæmia speedily lose their virulence when cultivated on artificial media. Ten days, seven, even five days are named as the maximum time for which the cocci remain virulent when cultivated on agar-agar, blood serum, &c. The results which I have obtained do not quite accord with the above.

A culture of the micrococcus of sputum septicæmia II. from the blood of a mouse, on blood serum, dated May 6th, which was kept for seven days at a temperature of 35° C., subsequently at room temperature, was used for inoculating a mouse in the abdominal cavity on the 7th of June. The mouse died inside of 20 hours, showing a pure culture of the cocci in

the blood. A culture of micrococcus II., 29 days old, caused death in 65 hours; a culture 40 days old failed to produce any effect.

The cocci were found exceedingly resistive to the action of low temperature; a mouse, who died of an infection with micrococcus II., was hung up outside of the window for 21 days, between 22nd December and 13th January, the temperature ranging during nearly the whole time between 5° and 15° C. below zero. At the end of this time the mouse was thawed out, and an infection made with the blood resulted in the death of the infected animal inside of 24 hours.

Experiments relating to the question of immunity.—It has been well established that immunity may be conferred upon animals by infecting them with material which has been so far weakened in its virulence that the animals sicken, but recover. A subsequent injection, even with a fully virulent culture, may then be harmless. I have attempted to produce immunity (1) by injecting 0.5 ccm. of dog blood direct from the artery into the abdominal cavity of mice. Dogs being immune from sputum septicæmia, it was hoped thereby to confer immunity upon the mice. All experiments with dog blood, however, turn out negatively. The blood of a large American rabbit, which had been infected without showing any reaction, conferred a partial immunity upon mice, they dying not until the fifth or seventh day after injection, while the control mice died within 24 hours; (2) mice were fed for several days on large quantities of saccharine with a view to so saturating them with this material that they would not furnish a suitable culture medium for the cocci; results here also only negative; (3) a large number of antiseptic solutions were made use of, injecting the mice before or after, or both before and after the injection in the abdominal cavity, or subcutaneously with varying results, sometimes the death of the animal being hastened, sometimes slightly retarded. The only substance with which I attained positive results was a 1 per cent. solution of trichloride of iodine. If we inject a mouse subcutaneously with two drops of the water of condensation from a fresh agar-agar or blood serum culture, or with a slight quantity of diluted infectious blood, and follow up the injection through the same canule with 0.3 ccm. of a 1 per cent. solution of trichloride of iodine (the maximal dose for a full-grown mouse), the animal will in most cases survive the infection, though it will lose a piece of skin as large as a finger-nail.

III.—PROPHYLAXIS.

The question to which I wish here to call particular attention concerns the measures which should be taken to prevent the undue growth of bacteria, pathogenic as well as non-pathogenic, in the mouth; the ultimate object being not alone to limit as far as possible the action of micro-organisms and their products upon the teeth, but to keep within bounds as well the many various diseases which, we have seen, may result from a lack of proper care of the mouth.

Not one of the many mouth washes with which the market is flooded makes even an approach towards accomplishing this end. For the purpose of disinfecting the mouth in cases of acute diseases, stomatitis, diphtheria, gangrene of the mouth, &c., physicians usually have recourse

to borax, boracic acid, chlorate of potash, permanganate of potash, lime-water, salicylic acid, &c., which, with the single exception of salicylic acid, have next to no action whatever upon the bacteria of the mouth, though some of them have undoubtedly an excellent cleansing action upon inflamed or suppurating surfaces, in virtue of which their use may be attended by very beneficial results.

In order to arrive at results of the greatest practical value it is necessary to test the action of the solution upon the bacteria in the mouth itself, and not upon pure cultures in bouillon. The latter method, while it allows us to determine with great precision the comparative action of various antiseptics, gives results which are too favourable to the latter.

Method I.

The mouth being rinsed for about 10 seconds with the antiseptic in suitable strength, the latter is evacuated into a sterilized glass vessel, and the time determined by the ordinary methods which elapses till the liquid becomes sterile.

Tests made with nearly all the available antiseptics of the dental pharmacopœia gave the results indicated in the following table. These tests were made mostly on my own saliva, which is moderately difficult to sterilize. I have found considerable differences in the time required for sterilizing the saliva of different persons.

Sublimate 1 : 2000 (8 tests) effected a marked diminution in the number of germs in one minute; the complete sterilization, however, required on an average over five minutes. The efficacy of the sublimate was increased in a surprising degree by the addition of benzoic acid.

Trichloride of iodine 1 : 2000 (7 tests) required an average time of about one and a quarter minutes, proving to be decidedly superior to the bichloride. It is also far less disagreeable than the latter, in fact, not at all disagreeable; it has, however, which must be considered as a great misfortune, an acid reaction, and is, therefore, not suited for daily use as a mouth wash. In the strength of 1 : 1500 (1 test) the sterilization was accomplished in 40 seconds.

Benzoic acid 1 : 300 (4 tests)	required 2 to 2½ minutes time.
Hydronaphthol 1 : 1500 (2 tests)	„ over 15 „
β naphthol 1 : 1500 (1 test)	„ „ 10 „
Lysol 1 : 200 (4 tests)	„ „ 5 „
Carbolic acid 1 : 100 (1 test)	„ „ 5 „
Boric acid 1 : 50 (1 test)	„ „ 11 „
Sulphocarbolate of zinc 1 : 250 (1 test)	„ „ 7½ „
Liq. alumin. acet. 1 : 20 (1 test)	„ „ 5 „
Alumin. acet. tartar. 1 : 60 (1 test)	„ „ 5 „
Thymol 1 : 2000 (1 test)	„ „ 5½ „
Peroxide of hydrogen 4 : 100 (3 tests)	„ „ 6 „
Thallinum sulphuric 1 : 1000	„ „ 6½ „
Saccharine sat. aq. sol. (2 tests)	„ „ 10 „
Saccharine sat. alc. sol. 1 : 400 (2 tests)	„ „ 3-1 „
Soluble saccharine 1 : 120 (1 test)	„ „ 5 „

Tinct. Rhatanac	...	...	...	15' 0
Alcohol. abs.	...	...	...	100' 0
Ol. menth. pip.	...	...	...	0' 50
Ol. cinnam	...	...	...	0' 50

Three parts of this to 27 parts of water kept in the mouth a full minute has a very marked effect upon the number of living bacteria in the mouth. If instead of water we use a 4 per cent. solution of peroxide of hydrogen in connection with the tincture, we obtain a still more striking result, as seen in Nos. 14 to 17 of the table given below :—

Method II.

A second method which I have employed to some extent consists in determining approximately the number of cultivable bacteria in the mouth 15 minutes after rinsing the same water, compared with the number present at the same hour on the following day 15 minutes after rinsing with an antiseptic wash. With a wash consisting of benzoic acid and saccharine in peroxide of hydrogen, the number was reduced, as an average of five tests, by $\frac{1}{3}$ ths, which it must be admitted indicates a very powerful action on the part of the wash.

Results almost as good were obtained with a wash consisting of benzoic acid and bichloride of mercury. The presence of the acid apparently increases the efficiency of the sublimate very materially. (See following table.)

Antiseptic.	No. of Colonies.	No. of Colonies in Control exper.
1. Saccharine-benzoic acid mouth wash...	47	198
2. " " " " " "	82	170
3. " " " " " "	51	277
4. " " " " " "	58	270
5. " " " " " "	63	197
6. " " " " " "	50	150
7. " " " " " "	35	175
8. " " " " " "	51	825
9. " " " " " "	14	720
9A. " " " " " "	31	851
10. " " " " " "	49	750
11. 10% peroxide of hydrogen, followed by mouth wash...	12	525
12. " " " " " "	6	82
13. " " " " " "	4	not made.
14. Mouth wash in 5% of H_2O_2 ...	14	"
15. " " " " " "	2	345
16. " " " " " "	62	421
17. " " " " " "	5	not made.
18. Sublimate-benzoic acid mouth wash...	12	"
19. " " " " " "	8	"
20. " " " " " "	2	179
21. Eau de Bôtot ...	120	not made.
22. " " " " " "	275	"
23. " " " " " "	280	"

These results certainly indicate a very powerful antiseptic action on the part of the wash. In experiments 1 to 7 only 20 ccm. of the wash were used, in the following 30 ccm., which accounts for the more favourable results in the later tests. Each time 3 ccm. of the wash were added to 27 ccm. water (or 2 to 18), and kept in the mouth a full minute.

The sublimate-benzoic acid mouth wash referred to in the table contains 0.8 bichloride of mercury, the other constituents being the same as those given in the first formula.

Method III.

A third method consists in injecting mice with the saliva of persons in whom it is known to be virulent, before and 15 minutes after rinsing. Eleven tests of this kind were made, and although the mouse injected before rinsing died in every case inside of 36 hours of sputum septicaemia, there was not a single case in which the mouse injected after the rinsing died of septicaemia. I was not able, however, to obtain such marked results over the pyogenic mouth bacteria. This again shows an action upon the micrococci of sputum septicaemia, pneumococci, &c., which might be taken advantage of as a prophylactic measure in acute infections of the mouth, in pneumonia, &c.

In conclusion, I may therefore mention as antiseptic mouth washes trichloride of iodine, 1 : 2000 to 1 : 1500; bichloride of mercury, 1 : 2000, in conjunction with benzoic acid, 1 : 300; salicylic acid, 1 : 300 to 1 : 250; benzoic acid, 1 : 300 to 1 : 250; saccharini, 1 : 400, preferably in combination with benzoic acid. The trichloride of iodine and bichloride of mercury are restricted to occasional use, particularly the trichloride should be used with care; salicylic acid must likewise be kept under observation; saccharine has a disagreeable taste; only benzoic acid appears to suffer from no pronounced undesirable qualities.

DEFECTIVE PERSONAL HYGIENE AS IT AFFECTS THE TEETH.¹

INFANCY, CHILDHOOD, AND SCHOOL LIFE.

By GEORGE CUNNINGHAM, Cambridge.

It would be impossible to exaggerate the value of a good set of teeth in a healthy mouth, and that whether the denture is regarded as an important organ of digestion, a valuable factor in the mechanism of speech, or as a decorative appendage which adds to the beauty or attractiveness of its owner's appearance. Yet there is, probably, no portion of the physical economy which is so generally and systematically neglected. It is not surprising, therefore, that the digestion, the speech, and the

¹ Paper read at the Seventh International Congress of Hygiene and Demography.

appearance of the bulk of the community are most seriously affected by this general carelessness, which is only equalled by the ignorance from which it arises.

Caries is the scientific name of the disease which leads to the wholesale disintegration of the tissues of the teeth, which are the hardest structures entering into man's composition. Its injurious effects are enormously increased by the fact, that if neglected it almost inevitably leads to a train of diseases which have the greatest influence upon the well-being of the entire organism.

There can be no doubt that defective personal hygiene is a practical cause of this disease, which is by far the most prevalent of all the diseases occurring during childhood and school life, and one might almost add, during infancy. Professional opinion throughout the country has long been unanimous as to the prevalence of dental diseases amongst children.

A communication, read to the British Dental Association in 1885, advocating compulsory attention to the teeth of school children, originated a movement which has gone on with increasing force and influence ever since. The practical outcome of this movement was the appointment of a committee to arrange a uniform scheme of investigation as to the condition of the teeth of school children throughout the country, in order to obtain statistics for the following purposes :—Firstly, to acquire a more exact knowledge of the condition of children's teeth at various ages ; and, secondly, to show by means of the facts thus acquired, the disabilities under which children frequently suffer in their growth and development, and the important bearing this condition has upon the future health of the individual.

This investigation is still far from being complete, but a sufficient number of examinations of a reliable nature have been made to prove the almost appalling frequency of dental caries and other diseases of the mouth, especially during the period of school life.

The frequency of caries is due to a variety of conditions which may be assigned to two distinct categories, the one intrinsic and the other extrinsic. Intrinsic conditions are those which arise from incomplete development, deficient nutrition, or the mal-position of individual or of all teeth, and which, by lowering their co-efficient of resistance, offer special points of attack. They must, therefore, be regarded as predisposing conditions in contradistinction to all extrinsic agencies.

Faulty structure of the teeth is the most important of all the predisposing causes of dental caries. "As a lump of table salt dissolves more rapidly in water on account of its porosity, than an equally large piece of rock salt, porous dentine is more rapidly decalcified than well developed, firm dentine, because the acid may more rapidly penetrate the tissue, and because less acid is required to decalcify a porous than a hard tooth." (Miller, p. 216.)

Deep fissures are usually found on the grinding surface of the bicuspid and molar teeth, frequently on the lingual surfaces of the front teeth, and more rarely on other surfaces. These naturally favour a continual retention of food particles and thus induce caries, from the

absence of an intact covering of enamel. If the enamel itself is also poorly developed, then the advance of disease will be all the more rapid. Not infrequently, owing to some inflammation while the tooth is being formed, the enamel, instead of being evenly distributed over the dentine, presents a pitted or deeply furrowed surface. These teeth, besides being as a rule weak, are extremely unsightly, and are commonly known as honeycombed teeth. Occasionally these teeth have a high co-efficient of resistance, in which case they are strong but extremely ugly. These teeth are sometimes termed "mercurial teeth," because many competent authorities ascribe this condition to the administration of mercury, usually in the form of "teething powders."

Various diseases of infancy may, by suspending nutrition or rendering it temporarily imperfect, cause these imperfections of enamel, which can in no way be regarded as the result of a specific form of disease; whatever the cause, the injury is effected usually during the first months of life, when it takes very little to disturb the highly susceptible functional harmony of nutrition, growth, and development.

A crowded condition or the irregular position of the teeth in the jaws predisposes to decay by forming spaces which favour the accumulation and retention of fermenting and acid-forming substances in contact with the enamel; in this connection the form of the teeth is not without considerable influence, as teeth, with convex approximal surfaces, by having their points of attack reduced to a minimum, are relatively less subject to caries than teeth with flat or slightly concave surfaces. Many of these irregularities are entirely due to preventible causes, two of which are especially important as affecting that period of life to which the consideration of the subject is at present necessarily limited.

Premature loss of temporary teeth is probably an important factor, but it is completely overshadowed by the more disastrous effects of their undue retention. The roots of the deciduous teeth are not always completely removed by the natural process, and the successional tooth is thereby frequently diverted from assuming its natural position in the arch. The more serious effects, however, are produced by the retention of temporary teeth, usually in a carious condition, and frequently accompanied by a chronic abscess formation, which originated in neglected caries. Undue retention of the temporary teeth must be regarded as a predisposing cause of caries, if only from the fact that it favours the retention of fermentable matter, since the teeth cannot be kept clean either spontaneously by the tongue, or in mastication, or artificially by the application of the tooth-brush.

"A recession or loosening of the gums from neglect of the teeth not only lays bare the dentine, but also permits the entrance of food particles round the necks of the teeth, or into pockets formed by the loosening of the gums, by which means a further predisposing cause for caries is furnished. This condition is most characteristic of a later period of life than that with which we are presently concerned, but the results of the examinations of the teeth of school children prove that, although this condition is relatively infrequent, it is occasionally found at this early life, when it is usually accompanied by deposits of tartar,

"which may be of very considerable quantity. Such a condition is "entirely due to defective personal hygiene of the mouth. Many of the "teeth of the school children examined show that they were in many "instances remarkably clean, although they were absolutely innocent of "the application of the tooth-brush, which conclusively proves that "mastication, properly performed and aided by the movements of the "lips and tongue, is a highly important factor in keeping the teeth clean, "and the mouth in a healthy condition.

"Many believe that a predisposition to caries may be inherited. It "cannot be denied that badly-developed, irregular teeth are inherited, "and in so far, inheritance may be considered as a predisposing cause "of caries."

With regard to general diseases which are generally described as predisposing causes, we adopt Miller's view that they should rather be regarded as "exciting causes of caries by imparting an acid reaction to the buccal juices."

Many authorities—notably Galippe and Magitot, in France, and Harlan, Sitherwood, and Kingsley, in America—regard excessive intellectual work during childhood and adolescence as an important factor in promoting the frequency of caries. Galippe has pointed out that, while we make laws in order to prevent children working in factories at an early age, little or no heed is paid to those other factories usually known as "schools," in which pupils submit spontaneously, or are coerced into intense mental work, with a view to some examination which crowns their studies or decides their future career. There is, on the whole, good ground for believing, as these authorities maintain, that premature intellectual work reacts upon the constitution of the teeth, and that in pupils whose scholastic success is very remarkable, caries is extremely frequent.

The extrinsic agencies producing caries include the result of such general diseases as scrofula, rachitis, dyspepsia, fever and others, such as rheumatism, gout, &c., not usually associated with the period of school life. Any disease (local or general) which has the effect of acidifying the saliva should be regarded as an exciting cause of caries, and therefore demanding special attention to the condition of the mouth, with a view to the neutralization of the saliva. Increased attention should, therefore, be devoted to the hygienic care of the mouth during sickness, instead of which even ordinary precautions are relaxed. Even when the patient is incapable of using a tooth-brush, his comfort will be increased by having the mouth rinsed by an antiseptic wash.

The chief exciting cause is the chemical change produced by micro-organisms in the fermentable matter lodged upon and between the teeth. Caries is, therefore, "a chemico-parasitical process consisting of two "distinctly marked stages; first, decalcification, or softening of the "tissue, and, secondly, dissolution of the softened residuc." The acids, which effect the decalcifications, are derived almost entirely from amylaceous and saccharine substances, retained in the fissures and defects, or on the surfaces of the teeth, and which undergo fermentation there. It is no new idea to regard the acids formed from sugar as being

especially injurious to the teeth. Miller considers that starch and amylaceous substances are much more detrimental to the teeth than sugar, particularly as sugar, being readily soluble, is soon carried away, or is so diluted with the saliva as to be rendered harmless, whereas amylaceous matter adheres to the teeth for a greater length of time, and consequently exercises a more continued action than sugar. Fermentable albuminous substances, mixed with the saliva, develop but small quantities of acids, which soon disappear.

"The second stage of caries, namely, the dissolution of the softened dentine by bacteria, is directly detectable under the microscope, and may be easily accomplished experimentally." The albuminous substance contained in the dentine forms, indeed, an excellent medium for the growth of bacteria, with the result that the soft tooth tissue is dissolved by the bacteria ferment, much as white of egg is by the gastric juice. The rapidity with which the process of destruction of the teeth advances in any mouth is evidently directly proportional to the intensity of the fermentation going on in the cavities or spaces where the food is retained, and inversely proportional to the density of the tooth substances.

The main points to be remembered are that caries is due to extrinsic or external causes which proceed from without inwards, and that as they affect most rapidly and completely those tissues which are richest in organic matter, the dentine of which the bulk of the tooth is composed is more quickly destroyed than the enamel; and, further, that the action of micro-organisms plays by far the chief rôle in the production of caries. In a scientifically clean mouth, therefore, there can be no caries. Prophylactic precautions, then, must consist in judicious efforts to sterilize the mouth, for it is obviously impossible to confine the diet to albuminous fermentable substances, such as flesh, eggs, &c.

With the appearance of the teeth arises the necessity for the application of personal hygienic precautions. In determining the necessity for these precautions, the mouth may be regarded as an incubator, in which, not only are the conditions of heat, humidity, and oxidation perfectly realized, but bacteria and the culture medium are almost inevitably constantly present. Having thus acquired some idea of the nature of the disease, and the causes by which it is produced, it is well worth considering how far these latter are under our control, especially as related to the period of life with which we are more immediately concerned.

Faulty structure is mostly dependent upon systematic conditions both of the parent and the child during the earliest part of the formation period of the teeth, and therefore is very largely beyond our control. It is important to remember, however, that, although the period of development begins particularly early in life, it is more or less actively continuous to a relatively late age, as the process of calcification, which begins some five months before birth, is not really complete until the age of about twenty. It is evident, therefore, that much may yet be done to improve the quality of the tooth structure, even although some injuries and defects be already beyond repair. Both the bones and teeth, containing as they do a large percentage of earthy matter, necessarily require during the

period of their growth a very liberal supply of those substances to the blood which can only derive those constructive materials from the food.

Those food stuffs best calculated to promote the formation of strong teeth should be prominent in the dietary of infants and children. It would take too long to discuss the most appropriate dietary ; suffice to remember that the chief article of food, the so-called "staff of life," is made somewhat of a broken reed by the senseless practice of measuring its quality by its whiteness. The production of this very whiteness necessarily means an exclusion of that portion of the wheat which is richest in nitrogenous and earthy matter ; while, again, a dark or brown colour is no certain test of its dietetic value, for much of the so-called "whole meal" or brown bread is but a commercial fraud. The bread as made for and supplied to our prisons may be taken as a type of what wholesome bread ought to be. As oatmeal is a well-recognized and wholesome article of diet, it should be remembered that while the removal of the finer bran from wheat reduces the amount of nitrogenous and fatty contents of the flour, the removal of the husks from oats has precisely the opposite effect, so that the finer the oatmeal the richer it is in those ingredients.

It is also important that the food should offer to the teeth a salutary resistance which they must overcome, since the mechanical action exercised upon such food stuffs has the very best effect upon the tooth structure. It is a well-recognized law of general application that every organ which we do not use ends by becoming atrophied or by losing its functional energy. The more the teeth are used in mastication the better will they be able to stand the attacks which they must inevitably encounter. If this is once rightly apprehended the importance of the first teeth becomes strikingly obvious, for, as the *Lancet*, commenting on Mr. Fisher's plea for the compulsory attention to the teeth of school children, says, in discussing this question : "If we wish to get at the root "of the evil we must commence our treatment with the deciduous teeth. "Many patients—nay, even medical practitioners—ask, what is the use "of preserving teeth which have only to serve their purpose for a time, "and which nature will replace? If a surgeon were asked what is the "use of provision callus in a case of fracture his answer would be readily "formulated, and just such an answer is applicable to the teeth. We "will run over just a few of the points that may result from disease and "its neglect. First, with regard to the child's health ; with decayed teeth, "and often in addition chronic gumboils, the little sufferer is kept awake "at night and his digestion affected by inability to masticate his food, "and more so by swallowing the foetid discharges from the abscesses. "As a consequence the child becomes weak and puny, and so the already "developing teeth suffer from the constitutional disturbance. Supposing "each tooth as it becomes the seat is extracted, then the masticatory "power is greatly enfeebled, and, moreover, it has been shown that where "many deciduous teeth have been removed, especially in the case of the "canines, the jaw does not develop as rapidly as it should do, and consequently when the permanent teeth erupt, some take their position "inside and some outside the arch, which irregularity is a potent predis-

“posing cause of caries, apart from its unsightliness. Again, take for instance a very common case, that of the second temporary molar extensively decayed. The first permanent molar assumes its due position posterior, and the first bicuspid anterior to it. Both these permanent teeth are frequently found affected on the side corresponding with the deciduous teeth, and the disease is undoubtedly due to the infection from decomposing food harboured by it. Although much more might be said upon this subject, we think that enough has been advanced to show the importance of the first teeth with reference to the welfare of their successors, which should, but so often do not, do duty for a lifetime. We believe that nothing short of the periodical examination every six months, and treatment if necessary, of the teeth of children can effectually cope with this evil.”

A further means by which we can counteract or limit the ravages of caries is well summed up by Miller, who is our greatest authority on the action of micro-organisms of the human mouth: “By repeated thorough systematic cleansing of the oral cavity and the teeth, to so far reduce the amount of fermentable matter as to materially diminish the production of acid as well as to rob the bacteria of the organic matter necessary to their development; by prohibiting the consumption of such foods and luxuries which readily undergo rapid fermentation, to remove the chief source of the ferment products injurious to the teeth; and lastly, by a proper and intelligent use of antiseptics, to destroy the bacteria and to limit their number and activity.”

Mechanical cleansing exercises a great influence upon the process of fermentation in the human mouth; and therefore, as soon as the temporary set of teeth is fully erupted, a suitable tooth-brush supplies the best method of cleansing, which operation should be performed daily, the most efficient time being after meals.

Efficient use of the temporary teeth in mastication is important in order that both the permanent teeth and the jaws may be made stronger and better developed; it is imperative to see that no crusts of bread are left or disposed of by being dipped in tea or any other similar fluid. Statistics prove that the state of the first teeth is, in something like two-thirds of the infants examined, already such that by the fourth and fifth year their masticatory powers are seriously impaired.

Any thorough system of prophylaxis must include periodical examination of the teeth by a competent dental practitioner, more especially as the arrest of caries is, generally speaking, easy of accomplishment, if only it is taken in time, which is usually long before the process has signalled its presence by the causation of pain. If the child's denture is in such a condition that efficient use causes uneasiness or pain, it is a sign that the case requires urgent attention.

The tooth-brush is too frequently used improperly, the action being confined to a more or less superficial application of it to the external or labial surfaces of the teeth with a to-and-fro motion. Its proper application consists in its being applied to all the surfaces of the teeth as far as possible. A rotary motion is the most effective, since the to-and-fro motions merely polish the surfaces which the motions of the lips, cheek,

and tongue keep tolerably clean. The brush should be made, first of all, to impinge upon the gum, and then be carried towards the masticating surfaces with a rotary motion. The upper teeth must therefore be brushed from the gum downwards and the lower from the gum upwards. The to-and-fro motion will suffice for the cleansing of the masticatory surfaces.

With regard to the kind of tooth-brush, a round handle facilitates the rotary rotation and the bristles should be of medium stiffness, not too hard, otherwise the gums may be unduly lacerated. By dipping the brush into hot water the bristles may be softened to the proper consistency. It should be remembered, however, that one is more likely to err in the selection of too soft rather than too hard a tooth-brush. Brushes with soft bristles are bad, and words are not strong enough to describe the stupidity of employing such a "make believe" as the badger-hair brush. As a rule, most tooth-brushes are made with an unnecessary number of bristles, and the bundles of bristles are too close together, where they are inserted into the back of the brush. Such brushes soon become clogged towards the back with an objectionable mass of tooth-powder, epithelial scales, and food *débris*. The india-rubber tooth-brush is also of comparatively little use for cleansing purposes. The tooth-brush should never be enclosed in that wretched piece of toilet ware known as the tooth-brush tray; after use, the tooth-brush should be dried on a towel and placed in a rack or jar to drain and allowed to dry freely exposed to the air and sunlight.

Frequently the use of the tooth-brush becomes perfunctory or is given up entirely, because of the gums bleeding. The more the gums bleed on brushing, the greater is the necessity of not only continuing the brushing but of increasing the vigour of its application. Any extreme readiness of the gums to bleed is the sure indication of their being in a diseased state, and the vigorous brushing, with the consequent bleeding, will usually bring the gums into a healthy tonic condition, in which they present no tendency to bleed.

Even if the tooth-brush is applied in the most thorough manner, it is difficult to prevent the lodgment of fermentable matter between the proximal surfaces of the teeth. Waxed floss silk may be introduced between even the closest teeth, and, as it is gently drawn to and fro towards the neck of the tooth, surfaces are cleaned which would never be reached by the tooth-brush. Ordinary embroidery, or skein silk, cut into short lengths and drawn across a piece of hard beeswax is quite as efficient, and much less expensive, than the spools of wax floss silk especially made for dental purposes. Short lengths of india-rubber, square or round, such as is used in the manufacture of elastic webbing, will also act in a similarly efficient way by being stretched. It passes between the teeth at the masticating surfaces, and on the tension being relieved it fills up the larger spaces towards the next, and as it is drawn through removes the *débris*.

Where teeth are placed somewhat apart, or where teeth stand alone, short lengths of ordinary thin narrow linen tape will be found efficient agents, while narrow silk tape, also well waxed, would be better where the

teeth are closer. Narrow strips of tracing cloth, such as is used by architects, is another material which may be used either with or without being waxed, and has the advantage of being water-proof. Where the tendency for the formation of tartar is great the charging of the ligature or the band with tooth-powder will do much to prevent the formation of deposits, presuming, of course, that the teeth have been first of all scaled. Such a cleansing as this will take a considerable time for its proper execution, and, if the ordinary daily cleansings are thoroughly carried out, the more extensive processes of cleansing need only be performed at longer intervals, say about once or twice a week. The importance of attention to the cleansing of the proximal surface is apparent when we know that, with the exception of the grinding surfaces of the molars, the majority of the cavities of decay are on these surfaces.

The use of the tooth-pick is unfortunately essential to the comfort of some adults, but it should not be thought of as a cleansing instrument for the teeth of children.

If one starts with clean teeth, the teeth may be kept fairly clean, by means of the tooth-brush, plain water, and floss silk, and "time," much time being given to the operation. In the light of our increased knowledge as to the etiology of dental caries the particular value laid on tooth-powder tends rather to decrease than to increase. There can be no doubt, however, that the use of a tooth-powder greatly facilitates the retention of the natural colour of the teeth, which I think is a better way to put it than using the stereotyped expression that the use of a tooth-powder makes the teeth whiter; that a good tooth-powder does not and should not do. All that may be reasonably expected of it is that it will remove, by mechanical friction, stains and discolourations obscuring the natural colour of the teeth, which is, after all, far from being white.

The principal action of a tooth-powder, then, is mechanical rather than medicinal. It is important, however, to regulate its frictional power. The powder should be very finely grained, and not gritty, therefore it should contain no cuttle-fish powder, no powdered oyster shells, no pumice powder, since these substances are too mechanical in their action. It should consist of alkaline substances, and contain no acid ingredients, or such as are capable of changing to acids in the mouth, since these are extremely destructive to tooth structure.

The presence of an antiseptic agent in the tooth-powder is desirable. Some antiseptic ingredients of tooth-powder are, however, to be condemned; for instance, charcoal and charred bread, although both antiseptic and frictional, are too gritty, and from constant use lead to the formation of a permanent bluish border to the gum, owing to the particles becoming buried in the tissues.

Miller recommends precipitated chalk, taken up on the tooth-brush with a dash of neutral or slightly alkaline soap, but he also considers a tooth-soap as being preferable to tooth-powder. He has also pointed out that as a matter of fact there is no evidence whatever that anything has as yet been accomplished in the prophylactic mouth wash alone: "It would, however, be going too far if we were to adopt the views of

“ those who have expressed the opinion that by proper care of the teeth
“ and constant use of antiseptic washes from childhood on, decay would
“ be entirely banished from the human mouth. This view is too
“ optimistic, for various reasons, chiefly because there are places in every
“ denture which will remain completely untouched even by the most
“ thorough application of the antiseptic, which will reach them in so
“ diluted a condition that it possesses little or no action. If a very
“ thorough mechanical cleansing has not preceded the antiseptic, its
“ action upon the centres of decay will be equal to little more than zero.
“ The great difficulty lies further in the fact that nearly all the materials
“ which possess antiseptic action are either contra-indicated altogether
“ in the mouth, or that they may be used only in very dilute solutions,
“ either because they are injurious to the general health, or locally to the
“ mucous membrane or to the teeth themselves. Finally, many otherwise
“ useful antiseptics are excluded because of their bad taste and smell.
“ For these reasons the preparation of a mouth wash which possesses
“ antiseptic action of any importance is accompanied by the greatest
“ difficulties.”

Miller has made an interesting series of experiments in order to determine the time necessary for devitalization with a number of the antiseptic materials in the form of a mouth wash. As the time during which in rinsing the mouth the wash remains in contact with the teeth varies from a few seconds to at most a minute, it will at once be seen that in order to sterilize the oral cavity a material must be found which is capable of devitalizing bacteria within a minute or less. It is possible after the complete mechanical cleansing of the mouth to obtain, by means of a solution of bichloride of mercury (1 in 2500), the almost perfect sterilization of the mouth. On account of its poisonous properties, and still more, perhaps, from its horrid and undisguisable taste, this material is not suitable for general application.

Listerine, which consists of oil of eucalyptus, boro-benzoic acid, winter green oil, &c., has been proved experimentally to be a very useful antiseptic mouth wash. It should be applied on a brush on cleansing the teeth, or slightly diluted as a mouth wash.

The best means, then, we have towards attaining this seeming impossibility of having a scientifically clean mouth, is to rely on a very thorough application of mechanical means—tooth-brush, floss silk, &c.—aided by antacid and sterilizing washes, the efficacy of which will be in proportion to the time of contact.

The hygiene of the sick-room has been excellently treated except on the question of defective personal hygiene as it affects the mouth, and as the subject is not mentioned, as far as I know, in any published work on the care of the sick, nor even in any popular treatise on the teeth, a few words here may not be out of place.

As a matter of fact, very few trained nurses give any attention to the teeth of their patients; everything else is carefully looked after and kept clean with the exception of the mouth. As we have seen, bacteria play a very important part in the destruction of the teeth even in ordinary health; it is, therefore, easy to understand how much more that condition

must be aggravated in the mouth of, say, a typhoid fever patient. The decay that frequently ensues from such cases is ascribed to constitutional conditions, but when we consider the increased temperature which accompanies the fever, and the character of the dietary which is necessary to be given, and of which a large portion must remain in contact with the uncleansed teeth, it is evident that the bacteria have more than usual facilities for producing caries, which in such cases must be regarded as arising from neglected local conditions.

Dr. Briggs, of Boston, has published some valuable hints and directions on this subject, and rightly emphasizes it with a view to the comfort of the invalid: "If you wish to see a grateful patient, rinse the mouth with some antiseptic solution, after he has been left for days 'without care!' I have had people tell me that nothing done for them in the course of their illness gave them such a feeling of comfort and rest as purifying the mouth.

In extreme cases, where the patient is in a comatose condition, the mouth can be wiped out with a soft cloth wet in the antiseptic solution; but in most cases I have found the ordinary invalid feeding-cup to answer the purpose nicely. The patient takes the solution into the mouth through the long spout, and, having rinsed thoroughly, closes the lips about the spout and forces the liquid back into the cup—all done without raising the head from the pillow.

I have no doubt there are physicians and nurses who attend to this matter, but I also doubt not that they are few and far between.

The proper time for the principal act of this personal hygiene is after the last meal. To brush the teeth in the morning only, is to lock the stable door after the steed is stolen. To do so after each meal must obviously be salutary, and so economic a proceeding, that the time necessarily involved is far from being wasted. To those who have never acquired the habit, it may seem irksome and unnecessary, but to those who have done so, comfort is not complete without even these supplementary cleansings.

Shortly after taking my degree at the Harvard University, in 1876, I was called upon to act as dental officer for a short period in a school devoted to the training of some poor gutter children, near Boston, U.S.A., and never shall I forget my first visit to that school, and seeing the children turn out promptly after dinner to what we may term their usual tooth-brush parade. In that school they needed not my instruction, but only my professional services in repairing the small amount of caries, inevitable even amongst such well-cared-for mouths. My fee was paid out of the private contributions of the members of the committee, a highly intelligent body of men and women, who showed their appreciation of the services of their own family dentist in the best possible way, by caring for, and treating the teeth of those children as if they belonged to members of their own family. Nor could I help contrasting this state of affairs with the miserable treatment I myself received when at school. In our dormitories there hung at the end of each bed a bag for the reception of the brush and comb, and I well remember on its external aspect a long mysterious narrow pocket, evidently intended for

the reception of the tooth-brush handle. During my residence of seven years in that school, I never saw within the walls of the institution a tooth-brush in one of these pockets, yet it was a rich institution—in fact so rich that it really did not know how best to spend its income. There was a dentist attached to the school, but my own experience, like that of the other boys, was ruthless extraction of our teeth when they ached. I have since learned that he received the munificent sum of 10*l.* a year for his services in a school of 180 boys, and I further know now that this skilled and scientific practitioner delegated his functions to the none too delicate hands of his pupils with a view to giving them practice. No attempt to prevent pain and suffering and the loss of valuable organs by filling, no advice as to cleansing or caring for them, came within our ken. Better for me, at least, better for my dental armature, had I been one of those gutter children at that American school than the successful scholar in that rich foundation school. Better the intelligent care of that considerate lay committee than the ruthless indifference of that highly qualified school dentist.

If I have seemed to dwell unduly on this question of oral hygiene, it is for a very simple reason. The economic aspect of any proposed measure of reform must always demand careful consideration, but it would be impossible for any body of school managers to assert with reason that any reform of school oral hygiene presents any serious economic difficulty. While the initiation of any reform rests with the authorities, it is the superintendents and the teachers who must be the active agents in its application. Teachers in schools where the children are resident cannot escape from their vicarious parental responsibility. They may, like parents, descant on the alleged impossibility of getting children to brush their teeth, forgetting that the regular cleansing of the mouth is as teachable as the washing of the face.

In the schools examined on behalf of the British Dental Association the mouths of all the scholars were certified as clean in one school only, the Church of England Home for Waifs and Strays, Marylebone Road. Here the excellent tooth-brush habits are encouraged by a system of good marks, which is sufficient proof that the result is due to a difference in the teachers rather than in the scholars.

One good and direct effect of our collective investigation has been the introduction of a tooth-brush into some of the schools examined. That the mere supply of a tooth-brush is insufficient is proved by the return from a small better class school in Cambridge, where the boys resided with their parents or guardians and in every case acknowledged their possession of a tooth-brush. Not a single mouth could be registered as clean—all dirty, and a few very dirty. Inquiries as to when they used it elicited such replies as "on Sundays," "twice a week," "occasionally," "when I go out to tea," &c.

The authorities thanked me for calling attention to this condition of affairs and announced their intention of having it remedied.

We must now consider as briefly as possible the necessity for remedial treatment for this disease, which is so characteristic of all the periods of school life from infancy onwards.

As the temporary teeth have already been alluded to, let us consider the principal features of the British Dental Association investigation.

A very small percentage of children have mouths free from caries, and a still smaller percentage not requiring dental treatment of any kind. In a large number of cases the cavities are few and in such a condition that a short and almost painless operation would save the teeth for years and in some cases for life, were proper hygienic care bestowed upon them. Indeed, such teeth, where the decay has been removed and the cavity filled, would actually be in a better condition than when erupted, as all such early carious cavities are dependent upon structural defects, such as pits and grooves in the enamel. This latter fact is further illustrated by the tendency of the corresponding teeth on each side of the mouth, which are developed at the same time, to become carious. Despite such defects, such teeth may have a high co-efficient of resistance.

In another series of cases we will find many cavities, but still in an initial stage, in which, besides the pits and fissures, we find the approximal surfaces attacked, mainly in front teeth. In yet another series, we will find from the rapid development of caries that a few teeth are already too far gone for any treatment, otherwise than by extraction; such a condition may be found even within a few months after eruption. Still these cases are only advanced stages of cavities, which were once in the incipient stage.

In a very small percentage of cases we find a large number of cavities in an advanced stage. In such cases any remedial treatment will have to be renewed again and again, as no process of filling can affect the low co-efficient of resistance, though diet, out-door exercise, and use of the teeth may improve their quality as age advances.

In quite a number of cases the labial surfaces of the teeth are found to be seriously affected, not so much by cavities as by surfaces of decay extending over the enamel; such a condition is entirely owing to habitual uncleanliness, as the teeth are often covered with a thick coating of a pasty, starchy mass of food *débris*. If the decay has not extended beyond the enamel, thorough cleansing and polishing of the enamel may arrest the mischief.

The tooth most frequently affected with caries is the first molar, which is erupted during the fifth or sixth year. The first permanent or so-called "sixth year molars" are the largest teeth in the mouth, and therefore very important factors in mastication. They have no successors and should not be allowed to become extensively decayed; even if they cannot be permanently saved, there are good reasons, with reference to the preservation of the integrity of the arch and to the requisite growth of the jaws, why they should be retained until the second molars (twelfth year) are erupted or erupting.

The economic aspect of treatment at this age is of the highest importance, for caries is essentially a disease of youth, from its dependence on predisposing causes which diminish as age advances. Most weak points in structure, pits, depressions, and proximal surfaces, will have been attacked before the age of seventeen or eighteen, and

almost all which will ever succumb by the age of twenty-five years. Further, a cavity of decay in the proximal surface of one tooth usually leads to its neighbour becoming affected, and thus far caries is an infectious disease. Even in bad cases, if the caries can be eradicated and excluded for a time, its control becomes fairly easy if the patient performs rigorously his share of the preventive work.

It is also certain that if certain teeth must be extracted, the best time for doing so is between the eleventh and the thirteenth year.

Treatment during school life directed to the amelioration of any irregularity of the teeth must be an important factor in minimizing the number of carious cavities by the removal of a not infrequent predisposing cause. Moreover, in many cases where the position of the teeth are quite regular, it is found that the extraction of four teeth, most frequently the first molars, or more rarely either of the bicuspid, is in its final effect more truly conservative treatment than their retention by resort to pure restorative operations.

The greater the likelihood of the individual being unable to procure the alternative restorative treatment in later life, the greater is the necessity for applying this remedial treatment radically, technically termed symmetrical extraction. This operation to be most successful should be performed from the eleventh to the thirteenth year, according to the eruption of the teeth. If it is deferred to a later age than the fifteenth or sixteenth year, there is great uncertainty as to the final results. The subsequent movement of the teeth which results from judiciously applied symmetrical extraction is such that even an expert may doubt, in later years, as to whether the first molars have been extracted or not, whereas the functional value of the denture as a masticating organ may be ruined by the indiscriminate extraction of the same number of teeth.

To ignore the abnormal or diseased conditions of the teeth during this period (from the sixth to the sixteenth year), even if unaccompanied by pain, will inevitably lead to a partial, if not a complete, wreckage of the dental organism as the functional unit, earlier or later, in the third period of the individual's life-history. There can be no question that from the trifling attention, and often from the entire lack of attention, paid to the teeth during this important period of eruption, a very large number of patients are doomed to pass through the third and major portion of their lives lamed and crippled so far as their jaws are concerned, or obliged to put up with the poor comfort and frequent discomfort of artificial substitutes. The lack of the watchful care of a thoroughly qualified dental practitioner, especially during the first half of the eruptive period, frequently entails resort to the cumbersome, the discomforting, and the expensive mechanical appliances for the correction of irregularities which might have been easily avoided.

During the past ten years I have had an opportunity of acquiring a pretty thorough knowledge of the average condition of the teeth of the University undergraduate, and have seen the fearful destruction caused by dental caries in the mouths of those who may be taken as typical of all that is best so far as social condition, physique, and means can afford mitigation or relief of these conditions.

If we regard for a moment even the purely academic aspect of some of these cases, is it not a deplorable short-sightedness and a sense of false economy which leads both the parent and the schoolmaster, by the neglect of attention to the dental organism during this eruptive period, to run the risk of a complete breakdown of the student on the eve of an all-important examination from pain and suffering with his teeth? The period of the ordinary, and especially of the honours and the tripos examinations at Cambridge, are characterized by a notable increase in the number of acute cases calling for treatment, and I have known more than one case where the student's position in the class list was materially affected thereby. What is true of this class of the community must be also more or less true of others. An intelligent student somewhat surprised me the other day by asking why it was that the parent and schoolmaster were generally so particular as to the quality and sufficiency of the food at school, and so utterly disregarding as to whether the boys had or had not an efficient dental mechanism for the assimilation of that food. Of course, my only reply could be that it was in consequence of their utter ignorance of the importance and the advantages, both economic and, as I am also convinced, educational, derivable from adequate attention to the teeth of the school children.

Without dwelling on the prevalent neglect of the teeth during early life, and the great amount of severe pain, loss of teeth, and the consequent incapacity for complete mastication—entailing indigestion and other serious maladies—to which that neglect leads, I should like to refer to the evidence of Mr. Bennett Williams, who kindly afforded me the opportunity of giving my first public lecture on "Preventive Dentistry" to several hundred parents of children attending a Board school in one of the poorest districts of North London, more especially as he called attention to a fact which cannot be without interest in such a section as this, namely, that a defective condition of the teeth may seriously impair their function as a part of the mechanism of phonation. He states that his experience as the head-master of one of the largest London Board schools, and the exceptional opportunities he has had for over a quarter of a century of noting the various changes in the health of the children of our working classes, convinced him that more sickness than is generally supposed is directly traceable to neglected and defective teeth. He has further observed that many cases of imperfect articulation, sometimes unhappily becoming a life-long habit, are due to the same cause. He thought that the lecture clearly proved that a good deal of the evil is easily preventible, and that the knowledge of a few simple truths, coupled with a little timely attention on the part of the parents, cannot fail to be of the utmost importance to the well-being of the children; and if the very necessary and valuable information which was imparted by the illustrated lecture could be more widely known, and if increased facilities could be afforded to the poor for securing skilled attention in cases of special difficulty, he believed that great national benefit would result.

As a contrast to this, so far as the class of the patient is concerned, and as typical of the condition where individuals might have been

expected to have fully availed themselves of the advantages of modern conservative dentistry, I would quote the evidence of a distinguished tutor at Trinity College, Cambridge. He advises his pupils to have their teeth put thoroughly in order, as he has found so many of them break down at examination time from acute pain. These cases are always of the third or fourth degree of caries and therefore of long standing, and involving disease of the pulp or the pericementum.

In the course of tabulating the British Dental Association statistics I was prompted to place the returns of teeth filled amongst the "accidents," for the very simple reason that I had before me the condition of about two thousand mouths and only two teeth returned as having been filled. Out of about forty schools examined I only found one to which a dentist had been appointed, and who was compensated in such a manner that his professional service was not confined to merely extracting teeth. This school is the Metropolitan and City Police Orphanage at Twickenham. A careful perusal of the report of the board of managers for the year 1890, shows that this institution is very largely supported by the contributions of the various police divisions. The dental surgeon's report is instructive, and the result of the statistical inquiry for the association is a very satisfactory proof of the utility of qualified professional skill. Under all the heads of inquiry this school contrasts very favourably with the others. In fact, it headed the list of having the lowest number of teeth requiring attention, as related to sex and average age. The number of boys examined was too small for comparison with other schools. The number of girls (eighty-four) is sufficient to give average results. The lowest age was eight, and the highest age was fifteen, and the average age twelve years and eight and a half months. The number of temporary teeth requiring filling was eight, and the number requiring extraction was thirty-one. The number of permanent teeth requiring filling was thirty-one, and the number of teeth lost was nineteen, and the number of teeth demanding extraction was forty-nine. The number of teeth filled was sixty-seven, a figure which is quite unique in our investigation so far. In estimating the number of teeth which had been attacked with caries it was necessary to correct the total of teeth requiring attention, and the ratio was thus raised from one hundred and eighteen per cent. requiring attention to one hundred and ninety-seven originally defective, thus showing that eighty per cent. had received adequate attention. The dental surgeon attached to this school may well be proud of this achievement, as it represents an expenditure of professional time for which, in my opinion, he is only partially remunerated by his annual salary of £20.

The managers of the North Surrey District School at Anerley, appointed a qualified dental surgeon some years ago. The dental surgeon attends one morning in each week, the school directors supplying instruments and materials and giving a salary of £60 a year. As there are eight hundred and fifty boys and girls between the ages of three and sixteen, I believe the remuneration is insufficient if the work be efficiently performed.

In a few other schools, appointments have been made with satisfactory results, except where the amount of remuneration is so inadequate that only extractions are done.

It is not creditable that even the poorest children should continue to be subjected to a cruel operation which it is perfectly evident might be avoided in a very large proportion of cases.

The following report in connection with the Dundee Industrial School, containing two hundred boys and eighty-five girls, from Mr. Fisher's case book, is more to the point. These are the words of the report: "Toothache" seems the great, and almost the only, trouble in the schools. The house-keeper said that if they had a dentist they could dispense with the services "of the physician; as yet they have no dental attention beyond an occasional extraction when a child is suffering from acute pain." Mr. Fisher has also shown the economic aspect of this question, especially as related to industrial schools, by showing that to continue neglecting the teeth of these children—when they are at the age that the maximum of benefit may be attained with the minimum of work—seems to be something like our Legislature continuing a vice against itself, as the very boys the Home Office endeavours so well to develop physically strong, and on whom the Treasury spends so much, are ignored by the Admiralty if they have the misfortune to be in the possession of a few bad teeth, when it is scarcely possible for them to be otherwise, as they do not get their fair share of attention and treatment to sustain their physical life.

With regard to the better-class schools, and especially those where the pupils are not resident, I would suggest the appointment of a dental officer, not necessarily to supply professional services to the pupils, unless the parents had failed to have the teeth attended to by their own dentist. Nothing should be done to interfere with the rights of the parents to consult the dental practitioner in whom they have most confidence.

An alternative plan, which is already adopted by some, in this respect, intelligent schools, is that a certificate from some reputable practitioner that the teeth are in order should be required on entering the school, and also on the return from each vacation. Autocratic as such a suggestion may sound, it is justifiable, for our contention is that just as children suffering from other diseases are declined until restored to health, so those suffering from dental disease should be refused as unfit for scholastic work.

While apologizing for taking up so much of your valuable time in bringing this subject before you, I am conscious that I have not done justice to its importance, partly from the difficulty of treating so difficult a subject in anything like a reasonable time. I trust, however, that I have said sufficient to place the matter in a new light, and would refer those who are desirous of further information on this subject to the papers already published by Mr. Fisher in pamphlet form, and containing much interesting matter on a question with which his name will ever be remembered.

KOCH'S TREATMENT OF TUBERCULOSIS.

SCHNITZLER (Wien)¹ relates the following case: A patient, thirty-one years old, affected with cough and hoarseness, tuberculosis of the lungs. Laryngoscope: Intumescence of the inter-arytenoid mucous membrane, swelling of the ventricular bands. Injection of 0.005—0.05 gramme—less reaction. After some days decrease of the intumescence, improvement of the state of the lungs. Some time later, sudden deterioration; continuous fever; pneumonia. The epiglottis became œdematous, multiple miliary nodules on the epiglottis in the pharynx and naso-pharynx. By conglomeration of the nodules tuberculous tumours were formed. As the state was hopeless an endeavour was now made to treat locally with tuberculinum; the diseased parts were brushed with it (0.1 pro dosi). The tubercles were destroyed and the mucous membrane cicatrized, but some time later new deterioration occurred, followed by death. (The case is illustrated by seventeen instructive woodcuts.) The *post-mortem* examination showed a very general tuberculosis.

[The second part of the paper in No. 14 of the Journal is signed "*Fortsetzung folgt*," but up to now (three months after) no continuation has appeared.]

Medicinische Gesellschaft in Basel, Meeting, February 5, 1891.²

DISCUSSION ON THE TREATMENT OF LARYNGEAL TUBERCULOSIS.

SCHWENDT reports five cases of laryngeal tuberculosis treated by curettement and other surgical methods:—

1. A patient, fifty-seven years old. Infiltration of the right vocal band. Tuberculosis of the lungs. Galvano-caustic treatment. The infiltration has disappeared, and there has been no recurrence.

2. A lady, sixteen years old. Tuberculosis of the lungs. Great infiltration of the inter-arytenoid space. Curettement without effect.

3. A patient, thirty-seven years old. Tuberculosis of the lungs. Infiltration of the inter-arytenoid mucous membrane. Cicatrization following curettement. No recurrence.

4. A patient, thirty-seven years old. Inter-arytenoid infiltration. Curettement. Cicatrization.

5. Curettement of a little tubercular ulcer.

SIEBENMANN relates three cases treated by Koch's method:—

1. A patient, thirty-four years old, had influenza. Nothing was found in the lungs. Laryngoscope: Ulcerations of the right vocal band, and on the posterior wall. Slight hoarseness. Nine injections of 0.002—0.024 gramme. The voice is now very hoarse, the ulcerations are very much enlarged on the right side, and a new ulcer has appeared on the left ventricular band. Aphonia. Loss of weight, 20 lbs.

2. A patient affected for two and a half years. Sometimes feverish.

¹ "Internat. Klin. Rundschau," Nos. 13, 14.

² "Correspondenzblatt für Schweizer Aerzte," 1891, No. 14.

Slight ulcers on the ventricular bands. Eight injections. During this time, increasing hoarseness and difficulty of swallowing. After the treatment, swelling and ulceration of the epiglottis, its laryngeal surface being covered with a large ulcer. General health much deteriorated.

VON DER MÜHLE reports three cases :—

1. A patient, twenty-two years old. Tuberculosis of the lungs. Ulcers in the arytenoid mucous membrane. After some injections of 0'001—0'002 gramme, cure of the ulcers followed. No more bacilli were observed during three months, and weight increased 6 lbs.

2. A patient, twenty years old. Tuberculosis of the lungs. Ulcers on the left vocal band. Injections of 0'003—0'1 gramme. Enlargement of the ulcers. Deterioration of the general health. Loss of weight, 6 lbs.

3. A patient, thirty-two years old. Dubious if laryngitis or tuberculosis of the larynx. Strong reaction. Still under treatment.

RUTINREYER reports the history of a patient, fifty-eight years old, with tuberculosis of the lungs. Vocal bands red. After five injections of 0'001—0'003 gramme, difficulties of swallowing appeared, and the epiglottis was inflamed. Some days later, death occurred. The *post-mortem* examination showed the deleterious effect of the injections.

Prof. ROTH says that only where it is possible to remove the deleterious poisons from the tuberculinum can we hope to obtain curative effects with it.

GRABOWER (Berlin) ¹ reports on forty cases treated with tuberculinum in the Moabit Hospital in Berlin. In all cases laryngeal tuberculosis was combined with tuberculous processes of the lungs.

1. A patient, thirty-seven years old, with infiltration of the arytenoid mucous membrane : twenty injections of 0'0005—0'1 gramme. No feverish reaction. Cicatrization of the infiltration. Cure reported eight weeks later.

2. A patient, thirty years old, with greyish intumescence of the inter-arytenoid fold : ten injections of 0'001—0'006 gramme. Improvement.

3. A patient, twenty-seven years old, with ulceration of the inter-arytenoid fold and the vocal bands : twenty-six injections of 0'001—0'1 gramme. Improvement reported ten weeks later.

4. A patient, seventeen years old, with tubercular intumescence of the posterior laryngeal wall : thirty-one injections of 0'001—0'1 gramme. Improvement.

5. A patient, thirty-two years old, with tuberculosis of the inter-arytenoid fold : twenty-five injections of 0'01—0'1 gramme. Improvement.

6. A patient, seventeen years old, with tubercular intumescence of the posterior laryngeal wall : thirty-seven injections of 0'001—0'04 gramme. Local improvement. Deterioration of the general health.

7. A patient, twenty years old, with tubercular infiltration of the posterior laryngeal wall. Local improvement. Decrease of strength, and hectic fever.

8. A patient, thirty-one years old, with intumescence of the posterior laryngeal wall : sixteen injections of 0'001—0'1 gramme. Improvement reported ten weeks later.

9. A patient, thirty-four years old, with intumescence of the posterior laryngeal wall : eighteen injections of 0'001—0'04 gramme. Improvement reported ten weeks later.

10. A patient, seventeen years old, with infiltration of the posterior laryngeal wall : twenty-two injections of 0'001—0'01 gramme. Improvement. In all these cases the voice became louder and clearer.

11. A patient, thirty-one years old, with greyish tumour on the posterior laryngeal wall : seventeen injections of 0'01 gramme. Much improved ; weight increased 16 lbs.

12. A patient, forty-eight years old, with intumescence of the posterior wall : nineteen injections. Disappearance of the intumescence.

13. A patient, forty-four years old, with infiltration of the posterior wall and tubercular tumour of the right vocal band : thirty-four injections of 0'001—0'1 gramme. Disappearance of the infiltration. Improved voice and general health.

14. A patient, twenty-three years old, with intumescence of the posterior wall : sixteen injections of 0'01—0'1 gramme. No improvement.

15. A patient, twenty-seven years old, with tumour of the posterior wall : twenty-five injections of 0'001—0'045 gramme. The tumour disappeared, and increase of weight 14 lbs.

16. A patient, forty-seven years old, with inflammation of the vocal and ventricular bands, and tumour of the posterior wall : thirty-two injections of 0'001—0'015 gramme. Larynx nearly cured. General health fair.

17. A patient, thirty-eight years old, with tuberculosis of the vocal bands and posterior wall : twenty-seven injections of 0'0005—0'01 gramme. Improvement.

18. A patient, twenty years old, with tubercular infiltration of the left ventricular band : eighteen injections. No improvement.

19. A patient, thirty-seven years old, with multiple cicatrices of old ulcers and infiltration of the posterior wall : thirty-four injections of 0'001—0'1 gramme. Less local improvement. Increase of weight, 16 lbs.

20. A patient, twenty-one years old, with large tumour of the posterior wall : twenty-seven injections of 0'001—0'06 gramme. No local change. Extirpation of a small part of the tumour, containing many bacilli. Now, after the injections, local reaction, and retrogression of the tumour. Deterioration of the general health.

21. A patient, twenty-nine years old, with infiltration of the posterior wall and the ventricular bands : thirty-five injections of 0'01—0'08 gramme. Exfoliation of tubercular masses, but eruption of multiple new tubercular nodules. Aphonia. Deterioration of the general health. Loss of weight, 16 lbs.

22. A patient, twenty-three years old, with infiltration of the posterior wall : twenty-four injections of 0'001—0'1 gramme. Improvement.

23. A patient, forty years old, with greyish infiltration of the posterior wall. After some injections, new tubercular eruption. Deterioration of the general health.

24. A patient, thirty-two years old, with infiltration of the arytenoid cartilages and the posterior wall : thirty injections of 0'002—0'1 gramme. Strong local reaction. No improvement.

25. A patient, forty-two years old, with infiltration of the arytenoid cartilages, the left ventricular band, and the posterior wall. After 0'001 gramme, strong local and general reaction, continuous fever, deterioration of the general health. No local improvement.

26. A patient, thirty years old, with both vocal bands covered with discoloured vegetations, also continued into the subglottic space. Fifteen injections of 0'001—0'4 gramme. No effect. Removal of the vegetations by curettement.

27. A patient, forty-eight years old, with infiltration of the posterior wall. After nineteen injections of 0'0005—0'04 gramme showed no change. Curettement of the prominences. Now, after fourteen injections, the mucous membrane is cured.

28. A patient, thirty years old, with ulceration of the right ventricular band, and the left vocal band; slight intumescence of the posterior wall. Injections of 0'00005—0'0005 gramme. Improvement after the first injections, but a rising of new tubercular ulcerations during the continued treatment.

29. A patient, twenty-one years old, with tubercular tumour on the posterior wall. Thirty-three injections of 0'001—0'006 gramme. Improvement. Increase of weight, 12 lbs.

30. A patient, thirty-one years old, with infiltration and ulceration of both vocal bands. Fifty-two injections of 0'001—0'1 gramme. Local improvement and improvement of general health.

31. A patient, forty years old, with ulceration of the left vocal band and tumour of the posterior wall. Forty-two injections. Cicatrization of the ulcer.

32. A patient, forty years old, with ulcerated intumescence of the posterior wall. Twenty-seven injections of 0'001—0'1 gramme. Cicatrization of the ulcer. Improvement reported nine weeks later.

33. A patient, twenty years old, with ulcerated tumour of the posterior wall, and inflammation of the vocal bands. Thirty-two injections of 0'001 gramme descending to 0'0001. Infiltration and ulceration have disappeared. Cure reported ten weeks later.

34. A patient, twenty-seven years old, with infiltration of the interarytenoid space, and ulcerations of the vocal bands. Forty-three injections of 0'001—0'01 gramme. Improvement of the local condition; decrease of strength; progress of the pulmonary phthisis.

35. A patient, twenty-six years old, with tubercular tumour between the arytenoid cartilages, ulcers of the vocal bands and the trachea. Twenty-six injections of 0'001—0'1 gramme. Improvement.

36. A patient, thirty-one years old, with infiltration of the ventricular and vocal bands, and ulceration of the posterior wall. Forty injections of 0'002—0'1 gramme. After the first fourteen injections, cicatrization. Later, efflorescence of new tuberculous nodules; deterioration of the state of the lungs; death.

37. A patient, thirty years old, with perforating ulcer of the epiglottis, ulcer of the left arytenoid cartilage and vocal band. Fifteen injections of 0'0005—0'04 gramme, and later twenty-three injections of 0'000—0'004 gramme. Improvement of the voice, cicatrization of the ulcer of the epiglottis. Increase of weight, 8 lbs.

38. A patient, twenty years old, with tuberculosis of the lungs, nothing in the larynx. After twenty-four injections, aphonia, infiltration of the ventricular bands, arising from miliary nodules.

39. A patient, forty-two years old, with tuberculosis of the lungs, nothing in the larynx. After sixteen injections, pains in the larynx, swelling of the left arytenoid cartilage and arytenoid fold, arising from miliary nodules. After twenty further injections, the laryngeal symptoms disappeared.

40. A patient, twenty-five years old, with infiltration and ulceration of the arytenoid cartilages and posterior wall. No improvement by the injections. Eruption of a syphilitic exanthema. Inunction cure. Improvement.

LANGENBACH¹ reports on ninety-nine cases of pulmonary phthisis treated with tuberculinum in the Lazarus Hospital. In one of these cases the pulmonary affection was slight, but a grave disease of the larynx existed. Infiltration of the ary-epiglottic folds, and ulceration of the vocal bands with hoarseness. After the treatment, improvement of the voice occurred, with increase of weight 7 lbs. The author has combined the injections with the internal use of picric acid and sublimate, and believes that he has thus made the treatment more effectual. He concludes that in this combination, Koch's treatment does not do damage, and often has a curative effect.

Michael.

LIEBREICH'S TREATMENT OF TUBERCULOSIS.

GRÜTTNER ("Münchener Med. Woch.," 1891, No. 28) has treated ten patients with laryngeal disease by cantharidinic salts. He applied injections of 0.0001—0.0005 gramme.

1. A patient, forty-two years old, with tuberculosis of the lungs, and a tumour between the arytenoid cartilages, and inflammation of the vocal bands. Ten injections were without any effect.

2. A patient, twenty-seven years old, with very grave tuberculosis of the lungs and larynx. The vocal cords irritable, and with lacerated edges. The movability of the vocal bands diminished after the treatment, so that the patient became dyspnoic. The patient believed that the expectoration was improved.

3. Progressive phthisis of the larynx and lungs in a patient, fifty-two years old. No improvement after several injections.

4. A patient, twenty-five years old, with tuberculosis of the lungs and total aphonia. No improvement.

Also in three cases of chronic laryngitis, one in a teacher, one in a girl twenty-one years old, and another in a girl twenty-three years old, were not at all improved by applications of the injections.

The author has abandoned the method as useless.

BOGROFF (Odessa) ("Berliner Klin. Woch.," 1891, No. 28). A patient, twenty-five years old, had pain in the throat, and was therefore treated for some time by iodide of potash, in the belief that the condition was

¹ "Deutsche Med. Woch.," No. 30.

syphilitic. The author found the left side of the pharynx covered with a thick, greyish mass, also affecting the palate; the palatine arch was also infiltrated. The epiglottis was covered with the same greyish mass. By bacteriological examination, tubercle bacilli were found. After ten injections of 0.001—0.003 gramme of cantharidinate of potash, the right side was all cicatrized; on the left side, the tubercles degenerated, and there was a commencing ulcerative process. *Michael.*

SOCIETY MEETINGS.

Laryngologische Gesellschaft in Berlin, Meetings, May 29 and
June 26, 1891.

CHOLEWA showed a probe for the application of trichloracetic acid.

HERZFELD showed a rhinolith, extracted from a lady, thirty years old, who since her youth had an obstruction of the left side of the nose. The rhinolith consists of carbonates.

B. FRAENKEL showed a naso-pharyngeal polypus which he had operated upon. It was six centimètres long, four centimètres broad, had its origin in the paro-fibro-cartilaginea, and filled the whole nose.

CHOLEWA recommended pyoktanin for diseases of the frontal cavity. In cases of suppuration of the bones it is only effectual if it can be applied directly.

MEYER related two cases of empyema antri Highmori improved by pyoktanin.

FLATAU recommended the exploration of the diseased Highmore cavity after a broad opening of the antrum.

SCHEINMANN says that pyoktanin can only help when combined with the other methods.

KATZENSTEIN and HERZFELD never saw any effect from pyoktanin.

LANDGRAF related a case of *Tuberculosis of the Lungs*, in which, a short time before death, occurred, first, *paralysis of the postici*; then paralysis of the left nervus recurrens. The *post-mortem* examination showed degeneration of the nerve.

KATZENSTEIN showed a patient, twenty-four years old, who had a tumour of the size of a walnut in the right nasal cavity. Operation; fission of the nose and extirpation. Two months later, recurrence. Now a tumour fills the whole nasal cavity and naso-pharynx, and there is paralysis of the orbicular muscles by perforation of the tumour.

SCHORLER showed a patient, fifty-four years of age, with paralysis of the tongue, the velum palati, and the postici muscles.

REMAK discussed the electrical peculiarities of the case.

SCHEIER showed two specimens of cancer of the radix linguæ.

Michael.

Laryngologische Gesellschaft in Berlin, Meeting, July 17, 1891.

DEMME.—*On Ozæna*.—The author observed in Fraenkel's policlinic three hundred and sixty-four cases of nasal diseases. Of those were sixty-four cases of ozæna. He says that the only characteristic is the fœtor, and that the disease must be differentiated from the simple rhinitis atrophicans. The propagation of the disease in some families is not caused by specific micro-organisms, but by hereditarily broad nasal cavities. The mucous membrane shows thickened epithelium in the upper portions. The author treats it by massage, as proposed by Braun in Trieste. By this treatment the nasal turbinateds become sometimes hypertrophic.

P. HEYMANN recommended insufflations of aristol.

SCHIEER reported a case of *Sarcoma of the Tongue*. Only fourteen cases of this disease are reported in literature. A patient, twenty-eight years old, complained of pains in the tongue. Then arose an ulcer, changing into a large increasing tumour. Some time later the whole tongue was converted into a tumour, and a gland in the neck became swollen. The microscopic examination showed it to be a round-cell sarcoma. Extirpation of the tumour was performed by Langenbeck's operation. Prognosis is unfavourable. *Michael.*

63e Versammlung Deutscher Naturforscher und Aerzte, 1891.

SUB-SECTION FOR RHINOLOGY AND LARYNGOLOGY.

SCHAEFFER (Bremen). *On One Thousand Cases of Adenoid Vegetations.*

DISCUSSION.

REICHERT (Berlin) could see the adenoid vegetations in children if he elevated the palate with a palate hook. He always could see them by posterior rhinoscopy with the rhinoscope constructed by himself. He recommends the operation with the galvano-cautery wire during narcosis.

HEYMANN (Berlin) operates with Gottstein's instrument. Twice he has observed severe hæmorrhage after operation.

LANGE (Copenhagen) had observed a case in which there were many adhesions between the hypertrophied tonsilla pharyngea and the choanæ, and the septum. He only once has seen secondary hæmorrhage, which occurred in an hæmophilous patient. It is not necessary to make *tabula rasa* in the naso-pharynx.

HOPMAN (Köln) recommends surgical removal during narcosis. The tonsilla pharyngea is a pathological tumour.

SCHAEFFER had never seen hæmorrhage, and believes that the good results are obtained by combined operation with Gottstein's knife and Michael's forceps.

HALBEIS (Salzburg) also operates with the forceps. Sometimes lymphatic glands disappear after the operation.

WINKLER (Bremen). *On the Relation between Stuttering and Nasal Diseases.* The author believes that (1) nasal diseases are often observed

in stuttering patients. (2) Some anomalies of stuttering patients are caused by nasal diseases. (3) The diminishing of the aerostatic pulmonary pressure cannot always be caused by nasal diseases. (4) In the treatment of stuttering the nasal condition must be taken in view.

HOPMAN. *On Deformities of the Choanæ.* The author reported six cases of stenosed choanæ, and showed plaster models of them.

HEYMANN has sometimes observed deformities on the posterior ends of the choanæ.

REUTER (Bad Ems). *On a Case of Wandering Goitre.*

HEYMANN (Berlin). *Anatomical Contribution to the Pathology of the Antrum of Highmore.* The author shows and illustrates his wonderful collection of diseases of the antrum of Highmore, also exhibited at the X. International Congress.

HALBEIS (Salzburg) relates a case of a patient who had obstruction of the left nose and discharge of a viscid fluid. A tumour filled the nasal cavity. When it was removed the patient experienced pain in the second upper molar tooth. Extraction of the tumour and of the tooth. Cure was obtained, without recurrence. A prodromal periostitis alveolaris had caused inflammation and cyst of the antrum of Highmore.

REICHERT (Berlin). *Laryngoscopic Treatment of Chronic Circumscribed Inflammations of the Laryngeal Mucous Membrane, and Demonstration of a New Laryngeal Knife.* The medicaments applied in the larynx should be exactly localized.

HENGESBACH (Dortmund) showed a case of *Cured Laryngeal Sarcoma.* The patient, forty years old, was first afflicted with hoarseness. The left vocal band was changed into a tumour. The author removed it by the galvano-cautery. A short time later, recurrence occurred. Extirpation of a little piece was performed. The microscopical examination showed that there was a carcinoma. Laryngo-fissure, and extirpation of the right vocal band and a part of the left effected. Cure in a short time. The general health was very good. The patient speaks with a whispering voice.

REUTER (Bad Ems) showed a modification of Zwardemaker's olfactoriometer.

SCHAEFFER (Bremen). *Abscesses of the Septum of Traumatic Origin.*

SCHAEFFER. *Curettement in Laryngeal Phthisis.* Michael.

BRITISH MEDICAL ASSOCIATION.—BOURNEMOUTH MEETING, 1891.

(From our Special Correspondent.)

It would be tackling the impossible if I were to make an attempt at giving a full and adequate description of the exhibits shown at this last meeting. I must confine myself to picking out a few of the more interesting features worthy of mention in the columns of this Journal.

Before all, great credit is due to the efforts on the part of the Committee of Arrangements for the excellent accommodation offered to the exhibitors. They found the place best adapted for the purpose, and the preparations made for the comfort and practical use of the members of the museum left nothing to wish for. There are but two things connected with this affair which may be considered a matter of regret to the exhibitors, and which may account for the want of the same substantial and general success achieved at former gatherings of this sort. The first disadvantage to the exhibitors arose from the fact that the museum was too far from the "Sections." After listening to a series of papers, the doctor, as a rule, finds it too troublesome to walk even a moderate distance in order to see an exhibition which proves interesting, instructive, and useful even to the casual observer, if once found. To the "student" it is ever a place which attracts. But the difficulty encountered in reaching any exhibition, when added to the natural dislike for displays of the kind, found in so many professional men, prevents the majority of them from going to view what really is worth seeing. Moreover, procrastination is not unfrequently the cause of absence. Especially in this instance did the delay of a visit from day to day lead to many disappointments on the part of medical men who consider the annual museum quite an essential feature of the yearly meetings of the Association. This leads to the second drawback referred to above. In order to render possible the reception given by the mayor of the borough of Bournemouth to the visiting medical men, the entire exhibition had to be removed on the evening of the 30th of July. This being only Thursday night, of course an entire day—in fact, the most important day of the week—was completely lost to the exhibitors.

Now both these objectionable features ought to be avoided in the future, if the managing committee desire to give satisfaction to the exhibitors, who pay for the privilege of filling the stalls with articles at once useful and necessary to the progressive and enterprising physician and surgeon. Of course, a great deal could be done by the exhibitors themselves towards rendering these annual "shows" more attractive to the profession; for instance, by being more anxious to explain their exhibits, and less greedy in their efforts to secure orders without giving the visitor a fair chance to see what others have of the same nature and make. By their incessant importunities they render a walk of inspection through the stalls a burden, and instead of attracting the medical man, they repulse him. But we presume that this is unavoidable in the proper pursuit of business, and every sensible man makes due allowance for zealous and insinuating endeavours.

A noticeable feature of this year's museum was the increased force of American exhibitors. These Yankees are everywhere to be found. They push ahead in all branches of business. Like the English sparrow, which some years ago was imported into the United States and has by this time established itself there beyond control, so the American producer imported himself into England, and to all appearances he has come to stay. He is not amiss here either, for he stimulates competition, and the purchasing public never loses by that. In fact the keener the

competition, the cheaper and more reliable the market. But with all due apology for this digression on ubiquitous cousin Jonathan, I must hurry to a point on the real object of these pages.

"Bovinine" made its first appearance the present year on these grounds. It is made by the J. B. Bush Manufacturing Co., and has now seriously entered the race for first place among the many well-known Extracts of Meat.

The Liquor Carnis Co. showed a good supply of Caffyn's Carnis Suppositories, Jelly Carnis, Liquor Carnis, and Malto-Carnis.

Carnrick and Co.'s Beef Peptonoids, Liquid Peptonoids and Soluble Food showed well to advantage.

George Mason and Co. had a good exhibit of their Essence of Beef, Concentrated Beef Tea, Meat Lozenges, and other preparations of a similar nature.

Brand and Co. had quite a list of "Specialities for Invalids," while The Bouillon Fleet Co. had a fair representation of their prepared Fluid and Compressed Beef Essence.

Mineral Waters, natural and artificial, were represented by Ingram and Royle (Æsculap, Carlsbad and Vichy), Packham and Co. (Seltzer, Lithia, Potash and other Aërated Waters), The Chemists Aërated and Mineral Water Association, Apollinaris Co., Hertz and Collingswood ("Franz Josef," Arsenio-Ferric Water), Dowden and Co., The Johannis Springs Co., and Idris and Co.

Wines were shown by Jacques et Fils, W. H. Newman, and Carswell and Co.

Nestlé's Food, Mellin's Food, The Maltine Manufacturing Co., Feltoe and Smith (Lime Juice Cordial), Loefflund's Dietetic Milk and Malt Products, Messrs. Riddle, Oppenheimer and Co. (Palatinoids and Liquors), Hoff's Malt Extract, Meteor Beer and Malto-Selzine, The Universal Digestive Tea Co., "Frame Food" Extract, Cadbury's Cocoa, Horlick's Malted Milk, Kutnow's Effervescent Carlsbad Powder, The Aylesbury Dairy Co., and Max Greger had all good and attractive stands.

Corbyn, Stacey & Co. had a display of Drugs, Chemicals and Pharmaceutical Preparations.

The Eucalyptus preparations of Messrs. Tucker deserve special mention, as do the Burra Gookeroo and Kola compounds of Thos. Christy & Co.

Hayden's Viburnum Compound was brought prominently to the notice of visitors by the New-York Pharmaceutical Co.

Soluble Coated Pills, Concentrated Mixtures, Antiseptic Preparations, and many new Drugs could be seen in the most enticing shapes and forms at the stall of C. J. Hewlett & Son.

Willows, Francis, and Butler were represented in a very efficient manner, and attracted much attention by the neatness of their exhibit.

Francis Newberry & Sons, Wyleys and Company, Wilcox & Co., James Robertson, Allen & Hanbury, and Parke, Davis & Co., all deserve commendation.

John Richardson & Co. made a splendid impression, and many of their specialities were frequently admired and deservedly praised.

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Burroughs, Wellcome and Co. were there, of course. The genial head of this enterprising firm was indefatigable in receiving and welcoming his many friends, and making new conquests among the numerous visitors of both sexes. He has a little way about him, as the Yankee styles it, and this accounts for the phenomenal success this firm has scored among the medical profession of the United Kingdom.

G. & G. Stern elicited much comment with their Puniline Preparations and Pepsalia.

Among the exhibitors of Antiseptic Articles were to be found the following firms: Seabury and Johnson, F. E. Bilson, Jeyes' Sanitary Compound Co., The Sanitary Wood-Wool Co., Messrs. Whitaker and Donisthorpe, Johnson & Johnson, F. W. Berk & Co., The Sanitas Co., and J. F. Macfarlan & Co.

G. Barth & Co. showed apparatus for Compressed Gases and Anæsthetics.

R. Rauschke, of Leeds, had an excellent assortment of Aspirators, Inhalers, Laryngeal Snares, Needle Holders, Post-Nasal Mirrors, and other important Throat Instruments.

Meyer & Meltzer displayed a superior choice of Nose and Throat Instruments. Their place in Great Portland Street is well worth a visit at any time.

Lynch & Co., Down Bros., John Weiss & Son, Hockin, Wilson & Co., Arnold & Sons, and Salmon, Ody & Co., introduced many new Surgical Instruments and Appliances.

K. Schall, of London, had among his well-assorted stock of Electrical Appliances, a novelty which will prove extremely useful to the Laryngologist and Rhinologist. We refer to the "Woakes Transformer," fitted for utilizing fifty to one hundred Volt currents, supplied for lighting houses, for cautery, small surgical lamps and Faradization.

Coxeter and Son had something new in the shape of a dry cell, which they are confident will replace any dry cell heretofore made.

Among the Books, the publications of F. A. Davis (40, Berners Street, London, W.) attracted most attention on account of their superior appearance. Type, printing, paper, binding—in fact, the entire work that lies in the hands of the Publisher—is as near perfection in the books of this firm as we have seen anywhere, whilst the illustrations contained in many of them are works of art produced by skilled experts.

Young J. Pentland, of Edinburgh, contributed much by his genial presence towards brightening the surroundings of his stand, and often pointed out, with pride, the splendid specimens of American Publications of which he carries a good stock.

H. K. Lewis, W. and A. K. Johnston, and Cassell and Company had representatives.

Messrs. Parnell and Co., 13, Rockley Road, London, W., Publishers and Curio Collectors, exhibited for the first time in the annual museum, and had many admiring callers. Their collection of ancient prints and books on medical and surgical topics is rare, rich, interesting and exceedingly valuable. The lover of the antique will find a pasture for eye and mind in their place of business whenever he goes there.

REVIEW.

Mikulicz (Breslau) and **Michelson** (Königsberg).—*Atlas der Krankheiten des Mundes und der Rachenhöhle.* 1c Hälfte. Berlin, 1891, bei Aug. Hirschwald. 22 Chromo-lithographirte Tafeln, mit Text. ("Atlas of the Diseases of the Mouth and Pharynx." First Part. Twenty-two Chromo-lithographic Tables, with Text.)

IN spite of the great number of illustrated works upon diseases of the skin, of the eye, and of the larynx, we have not yet any such work upon diseases of the oral cavity. The dignity of these diseases has for a long time been acknowledged, but no single man could edit such a work. The laryngeal patients go to the laryngologists, the eye patients to the ophthalmologists, the skin patients to the dermatologists, and a specialist of these diseases will thus have the necessary material for such a work. But of patients with diseases of the mouth and pharynx, the slightly affected go to their family doctor; those with chronic diseases to the laryngologists; the dental patients to the dentists, and the malignant tumour comes into the hands of the surgeon. Therefore such a book could only be produced by the combined efforts of at least two authors, and we are convinced that this book, written by an eminent surgeon and a well-known laryngologist, will be the more welcome, as its style is of unusual excellence. The first half has already appeared, but the second part, if we may judge from the contents promised, will be equal to the first. The illustrations refer to rare cases observed by the authors, as well as more important and exquisite reproductions of the common diseases of the mouth and pharynx. Thus, the first table shows a rare case of cyst of the lip and the often observed scrofulous thickening of the lips. Tables 2 and 3 exhibit syphilitic initial affections of the lips; 4, 5, and 6, benign and malignant neoplasms. Of these is of special interest a case of cavernous angioma which later on degenerated into a carcinoma. Also of interest are the cases of tuberculous affections contained in the seventh table. Tables 8 to 12 exhibit diseases of the gum, simple and specific inflammations, benign and malignant neoplasms. Table 14 shows a rare case of melanoma of the palate, followed, as the text relates, quickly by death. Perfectly performed are the pictures of erythema and syphilis of the soft palate on tables 15 and 16. Not so well executed are the cases of simple tonsillitis on table 17. Here the inflammation ends so abruptly that we might believe, in the absence of explanatory text, that they were examples of specific affections. But the difference in the pictures of syphilis and tuberculosis is very characteristically exhibited by the illustrations on table 18. Abscess of the tonsils and specific perforation on tables 19 and 21 are of great reality. But without doubt the best illustrations are those of carcinoma of the tonsil on the last table (22). Here the hard wall of the ulcers is so remarkably naturally pictured that we can almost fancy we can feel it. Not only to specialists, but also to practical physicians, the atlas must be recommended. Both from scientific and artistic points of view, it is an excellent work of the first rank.

Michael.

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POSTICUS PARALYSIS IN INFANTS.

By W. ROBERTSON, M.D., Surgeon Throat and Ear Hospital,
Newcastle-on-Tyne.

WITHIN the last five years I have met from time to time with cases of a condition in children of ages varying from three weeks old to eighteen months, to which the above term may be provisionally applied. These cases, six in all, of which I have notes, survived and got rid of the disorder with one exception, and in this case a fatal termination was brought about through exposure to the east winds at a coast resort. A brief clinical account of these cases will illustrate the condition to which I refer.

Case I.: Charles H., aged two years, S. B.—, August 17, 1891, was brought to me during June last suffering from noisy, difficult, and prolonged inspiration. Expiration was quick and easy, and voice unaffected. There was slight cyanosis, increased on exertion, as was also the inspiratory distress. The ribs were much deformed, the lateral region of the chest being greatly indrawn. The epigastrium, as well as the soft parts above the clavicle, were retracted during inspiration, and the larynx was observed also to move unduly during inspiration. Examination of the throat showed an extreme state of pharyngitis extending to the vault. The statement given by the mother was, that the child began to suffer from what one doctor called chronic croup, "a very good descriptive term for the condition superficially examined, resembling exactly that of a child in moderate distress from typical croupous breathing," after some ill-

defined pulmonary attack when it was six months old. Since then the child has been a continual source of anxiety, more especially during the night and morning just after awakening, when great respiratory difficulty was generally experienced, a discharge of mucus giving some relief. No examination of the larynx could be made with the laryngoscope. As far as could be made out the chest was normal, the stenotic murmur, however, obscuring the nature of the vesicular murmur to a great extent. The child was put on bromide of ammonia, a nasal alkaline spray, and resorcin in mineral oil to drop into nose. A week or two of this treatment improved matters but slowly.

July 7, 1891. I intubated, retaining the tube for one hour. This was followed by more decided improvement. Shortly after this, I scraped out the post-nasum with the finger nail, and recommended a continuation of the spray and resorcin drops.

July 25, 1891. The child was intubated again, and the tube retained for two hours; during the most of this time the child slept.

August 20, 1891. Since last seen the child has greatly improved. The inspiratory dyspnoea has almost entirely disappeared. It now rests well at night, and has no difficulty whatever on awakening in the morning.

Case II.: John Norman, aged three weeks, H——. This baby when first seen was found to be suffering severely from persistent inspiratory dyspnoea, dating from a few days after its birth, and most pronounced at nursing. Its respiration was so noisy that it could be heard in the next room. Examination of the throat showed a thickened granular condition of the mucous membrane off the oro-pharynx. No fever or enlarged glands about the neck existed. The child was fairly nourished.

Treatment.—Am. bromide, nasal spray, and resorcin drops for the nose. These remedies were used twice daily for one month, when practically the child was well. Subsequently the remedies were used thrice weekly for three months, I saw this child nine months afterwards and found it plump and well. The mother states, however, that a slight return of the affection now and then disturbs the child for an hour or so at a time on exposure to cold.

In another case, Gustave Adolph S——, when six months old, began to suffer from persistent inspiratory dyspnoea, which was aggravated by any excitement, and also by nursing. The condition persisted for months, becoming intensified as time went on. At the age of one year its state was grave indeed, and it was blistered over the occiput, it being thought evidently that some cerebral trouble existed. Several attacks of what were termed general convulsions were observed. This case was not under my care at any time, and I merely mention these facts about diagnosis and treatment, &c., to show how entirely the disease may be misapprehended, and how any treatment but that applied to the local conditions will fail to cure. After weeks of unnecessarily severe treatment the child recovered from the laryngeal affection, but remains weak and delicate. It still suffers from post-nasal growths, and is now deaf.

The case that succumbed came before me early in my experience of this condition. It began to suffer when it was only a few weeks old, and

displayed the usual symptoms of the condition up to the time of its death, at the age of six months. It was removed to an East coast resort during the prevalence of east winds, and there caught pneumonia, which proved rapidly fatal. The other cases resemble so much Case II. that further detail is unnecessary.

Remarks.—On surveying these cases it will be observed that the earlier in the course of the disease the case comes under treatment the less the difficulty experienced in bringing about a cure. In three such cases this was rapidly effected. In those cases, however, where delay has taken place, and where no appropriate treatment has been adopted, secondary complications set in and greatly increase the original state of posticus paralysis.

The first two cases especially are typical of the condition in question, and as well illustrate the grades of the affection—that is, a state of persistent dyspnoea exclusively affecting inspiration. Judging from the character of the laryngeal symptoms in these cases, bilateral impairment of the postici muscle suggests itself.

The power to cough, the comparatively clear voice retained in all these cases, the length of time over which the disease extends, and the deepening of symptoms as that goes on, differentiates the condition from affections of the adductors—for example, spasm of the glottis. These same qualities equally disprove the existence of papillomata in any of the cases referred to, for in papillomata it is recognised that there is a great frequency of alteration of voice. In none of the cases were there noticed evidence of cervical or thoracic tumour, or any pressure on vagi or recurrent. Diphtheria was carefully eliminated in each case.

Etiology.—In considering this aspect of the disorder, reference must be drawn to the generally associated diseased states of the post-nasum and pharynx, and the age of the cases at which it is most exclusively met with. Looking at the pronounced symptoms in this condition, it would seem that the only probable explanation of the phenomena is to suppose a bilateral abductor paralysis, and that the subsequent gradually increasing severity of the symptoms where the condition has been in existence for some time, is to be attributed to a “secondary contracture” of the adductors—a common enough phenomenon in nervous pathology.

Irritation in the regions of the post-nasum, pharynx, &c., is probably transmitted to the medulla, there exciting and exhausting the accessory nucleus, and thus leading to depraved innervation of the muscles in question.

Collateral catarrh of the mucosa covering the postici muscles may also act injuriously on these structures.

Treatment.—From the above indications, treatment on the proper lines must be rigorously carried out in order that the child may be rescued before secondary contraction sets in, which demands more serious steps to be taken. In the earlier cases met with, I usually prescribed am. bromide, tepid sponging, etc., but of late have treated more rigorously the post-nasal and pharyngeal conditions, and with the best results. Where granulations are felt in the post-nasum these are crushed or otherwise destroyed. In a severe case like Case I., I should at once intubate,

because, apart from the relief to respiration for the time being, the insertion of the tube seems to have a rousing effect on the general musculature of the larynx. It seems to dissipate any secondary contraction that may have supervened during the course of the malady, if this has existed long enough to allow of secondary contracture of the constrictors to have taken place.

TUMOURS OF THE NOSE AND THROAT.

By Dr. JOHN MACINTYRE.

MALIGNANT TUMOURS OF THE NASO-PHARYNX.

MALIGNANT disease in this region is by no means common, and the two following cases may not be without interest.

Case I.: The first case, which came under my notice in July, 1886, was a man, aged forty-eight, who had been admitted to the Western Infirmary two months previously, under the care of Dr. Finlayson, suffering from severe pain in the head, and with distinct paralysis of the external rectus of the right eye. The patient had been sent to the hospital on the supposition that the disease was syphilitic, but no history of this affection could be found. He had suffered from the disease since December, 1884, and the pain was localized at the top of the nose, but radiated to the right temple and cheek and also to the teeth. Shortly after admission the patient complained of severe basal headache, particularly at the occiput. In February, 1885, a discharge of matter from the right nostril had set in, which continued throughout the disease, and both nostrils apparently became affected shortly after this date. So far as could be ascertained the nasal affection preceded that of the right eye, which was deviated inwards and with complete inability to evert it. Diplopia was distinct, and it was homonymous. Careful examination of the eyes by Dr. Freeland Fergus revealed no gross lesion, but it might be noted that there was a history of old-standing discharge from the left ear, with great impairment of the hearing. In the right ear the hearing became distinctly affected in April, at a time when the discharge from the left ear was very much diminished. The left tympanic membrane had been partly destroyed with the old suppurative process. On the right side the membrane was thick and opaque, but after repeated investigation it was supposed that there was deafness from nervous cause on the right side as well. There was slight deficiency in the power of movement on the right cheek, and slight deviation of the tongue to the right. A small gland could be detected in the right side of the neck over the sterno-mastoid.

(For these notes from the ward journal we are largely indebted to Dr. Finlayson.)

Examination of the nostrils revealed old-standing rhinitis in the region of the middle and inferior turbinated bones on both sides, with a great deal of inflammatory exudation. In the naso-pharynx a tumour could be detected in the vault, which was somewhat rounded in shape, irregular

on the surface, and evidently growing from the base of the skull. The membrane of the naso-pharynx was seen to be thickened and inflamed. The tumour grew very rapidly, and by the end of August the whole upper part of the pharynx was filled with the new growth. Shortly after leaving the hospital, the pupil, which previously had been directed inwards, returned to its normal condition, and complete ptosis set in. About the same time the cheek became distinctly paralysed, and the speech affected. The patient's condition became steadily worse, and for some weeks before death breathing was performed with difficulty. As the tumour extended the pain in the head and neck became more difficult to control, and the discharge proved one of the most distressing symptoms of the case, when paralysis of the pharynx supervened. The patient died on the 5th December, 1886, and permission to examine the brain was given on the 7th.

The following notes were taken at the time :

On removing the calvarium a quantity of clear serous fluid beneath the pia mater was found, beyond this the upper surface of the cerebrum appeared normal; the base of the brain was also normal, with the exception of a small abrasion of the inferior surface of the temporo-sphenoidal lobe, where it lay in contact with the diseased membranes. In the middle fossa of the skull the membranes were greatly destroyed, and there was a considerable quantity of muco-purulent fluid present. A tumour of the body of the sphenoid bone was next made out, which passed outwards into the great wing for about an inch, forwards to the sphenoid fissure, and posteriorly involved the apex of the petrous portion of the temporal bone. On opening the naso-pharynx, this, and the posterior portion of the nasal cavity, were seen to be almost completely destroyed, the parts being reduced to pulpy consistence. After removing a portion of the base of the skull, the ligaments between the atlas, axis, and occipital bone were found to be involved, the deep muscles, viz., rect. cap. posticus and anticus, splenius capitis, longus colli, and the fasciæ over and around these muscles were all infiltrated with what appeared to be a quickly-growing tumour, the destruction being so great that the different parts were recognised with difficulty. The medulla, cerebellum, and orbit were apparently normal. Microscopic examination showed the tumour to be sarcomatous in nature, and of the round cell variety.

Case II. : A. E., moulder, consulted me on 8th January, 1891, at the Glasgow Dispensary for Diseases of the Throat. The patient complained of great pain in the head, obstruction in the nostrils, deafness in the right ear, and a great discharge from the nose and throat. Examination of the nostrils showed an old-standing rhinitis on both sides, with deflection of the septum to the left. The turbinated bones on the right side were very much enlarged, and the whole parts were bathed in a fetid discharge. Examination of the fauces revealed a slight catarrh which had not extended to the larynx, but the posterior wall of the pharynx was covered with the same discharge as that found in the nostril. The soft palate was driven forward, and on examination of the naso-pharynx a large neoplasm could be seen filling the whole cavity in the upper two-thirds of its extent. The

growth sprang from the vault of the pharynx, was very dense, irregular on the surface, and covered with a considerable quantity of blood and mucus. At one or two parts of the lateral aspect death of the parts was taking place, probably from pressure, and the necrosed tissue was hanging in shreds.

The patient stated that he had previously enjoyed excellent health, and until this affection began he had never consulted a medical man. There was nothing in the family or personal history worthy of note. A small piece of the growth was removed and examined microscopically, when it proved to be a sarcomatous mass, consisting for the most part of tissue resembling that found in lymphatic glands. The patient attended the dispensary for some little time, but refused to take the risk of operation.

Remarks.—The first case above described is interesting to laryngologists from the diagnostic point of view. The more prominent symptoms of the case led those who had it under their care at first to treat it as specific in origin, but a careful examination of the naso-pharynx showed at once the presence of a neoplasm, which left no doubt whatever about the nature of the affection. The situation of the pain, discharge, enlarged glands, and particularly the order in which the different cranial nerves became affected, all pointed to malignant tumour in this region. The early implication of the sixth cranial nerve was a point of very great significance, because in a tumour springing from the base of the sphenoid the possibility of operation might have been discussed, but the involvement of the sixth cranial nerve, lying as it does close to the body of the bone, on its upper aspect indicated a condition of matters which showed the impossibility of any operative measure. The third, fourth, and fifth cranial nerves in this region are arranged in this definite order from above downwards, and from within outwards, while the sixth, lying more internal, would therefore be first implicated in a growth from the body of the bone. It is extremely interesting to note, first the implication of the sixth nerve with paralysis of the external rectus, and afterwards the return of the pupil to its normal position, when the growth had extended outwards sufficiently to involve the third. The cranial nerves became successively implicated on the affected side, and the invasion of the disease from one region to another could be traced by the results which showed this in the areas of distribution.

The two cases are interesting as illustrating the somewhat rarer affections of the naso-pharynx.

CARCINOMA OF THE TONSIL (Secondary) WITH SEVERE HÆMORRHAGE.

On the 28th of June, 1891, Dr. Alexander Morton requested me to see a patient who was suffering from a severe hæmorrhage from the right tonsil. The patient, J. I., had evidently suffered very much from the hæmorrhage, as well as the invasion of disease. He was very weak, emaciated, and nervous, particularly in view of the possibility of any movement increasing the troublesome hæmorrhage. A large quantity of mucus and blood-clot could be seen at the base of the tongue, and by

careful examination the source of the hæmorrhage was seen to be a small opening in the lower border of the right tonsil. The blood was oozing constantly from the surface, and although the gland was not much larger than that of the left side, still its consistency and general appearance left no doubt whatever that we were dealing with malignant disease, in all probability carcinoma. The thermo-cautery was applied, and this so far arrested the hæmorrhage that comparatively little trouble was afterwards experienced.

I am indebted to his physician, Dr. Morton, for the additional history of the case: "On April 26th, 1890, Dr. Hector C. Cameron removed from the outer and upper part of Mr. I——'s right thigh a large fungating tumour. It had quite the appearance of a melanotic sarcoma, but microscopic examination proved it to be a carcinoma. It had originated two years before as a small (pea-sized), blackish tumour, but an operation had been persistently objected to by the patient till the date above mentioned. One of the inguinal glands was already considerably enlarged, and was removed by Dr. Cameron at the time of the operation. Secondary hæmorrhage took place on two occasions within thirty-six hours afterwards, and was checked with some difficulty. Thereafter, the patient improved steadily till the third week of May, when he was quite convalescent, sat up most of the day in bed, took his food well, and was very cheerful. The wound, meanwhile, was healing very well. During the last week of May, he began to complain of quantities of phlegm coming from his throat, and in a few days little specks of black-clotted blood made their appearance in the mucus. The source of the hæmorrhage was for some time obscure, but ultimately a small pinhead-sized opening was discovered in the right tonsil, from which blood oozed. With the help of rhatany lozenges, hamamelis, gargles, and turpentine inwardly, the bleeding ceased in about ten days, though he still complained of the thick mucus "clogging his throat." He became very depressed in spirits, and complained daily of persistent and increasing weakness. The loss of flesh was obvious to everyone. Now and again he spoke of a pain in the abdomen, but nothing was discoverable by physical examination. About the 20th of June the bleeding from the tonsil returned worse than ever. The little opening formerly discovered in the tonsil was now found either to have blood constantly oozing from it, or covered by a small black clot. Dr. Macintyre was called in. The use of the thermo-cautery certainly helped to check the bleeding, as it did not afterwards prove troublesome. Dr. Gemmell saw the patient on July 2nd, who was now sinking fast. He lay in a semi-comatose state, his skin sown with innumerable little black nodules (many of them the size of a pea), and his liver greatly swollen and hard to the touch. He died three days afterwards."

Remarks.—In view of the present interest taken in the frequency of the occurrence of carcinoma of the tonsil, this case is of interest, and the secondary nature of the affection is a point worthy of note.

CARCINOMA OF THE LARYNX.

As the operation of extirpation of the larynx is at present upon trial, the following case is of interest:—

On the 10th August, 1887, the patient, A. B., forty-nine years of age, consulted me, complaining of a sore throat. He stated that for two years or so previously he had been suffering from hoarseness, pain, and slight cough; that he had had his throat frequently burned with lunar caustic, that he had used a considerable number of sprays, gargles, and inhalations, recommended by different physicians, but all without success. The previous history was excellent. He was married, had ten children, all strong and healthy.

On examination, slight rhinitis was noted on both sides. There was a little catarrh in the fauces, marked injection of the veins at the base of the tongue, and evidence of ordinary granular pharyngitis. What was most striking in the case, however, was the catarrh which existed throughout the larynx, and particularly on the right vocal cord, which was very much thickened. It is worth while noticing that at this date the vocal cord was freely movable, and there was no evidence of enlarged glands. The patient was placed upon sedative treatment, and carefully watched for a time. The appearances were those of simple chronic catarrh, evidently of a very obstinate nature, but there was nothing definite in the throat to suggest a constitutional affection. As the patient was in the habit of rising very early in the morning to attend to a harassing business, we recommended him to have complete rest to the voice, and with this view had a consultation with Dr. Coats, Glasgow, who also strongly insisted upon the adoption of this course. The patient refused to acquiesce, and passed out of our hands. For a time succeeding this the true history is difficult to get, but it would appear that he saw several surgeons, most of whom recommended very much the same lines of treatment as those which we had originally carried out. Towards the end of that year a change took place in the throat, leading those in charge of the case to bring up the question of constitutional disease. Some diagnosed it as a case of syphilis; others, of carcinoma. It is important to note that towards the end of 1887 the possibility of extirpation of the larynx was put before our patient, who, after due consideration of all the points of the case, resolved to allow the disease to take its course, preferring to have what he thought would be a short duration of life rather than risk an operation.

For a considerable period the disease was allowed to take its course with no one attending, but in the early part of March, 1890, he again came to us with evidence of carcinoma, beyond all doubt. A small piece was removed from the tumour, which had invaded the whole right side of the larynx, and the vocal cords, true and false, the inter-arytenoid membrane, and the cord of the opposite side were involved. Microscopic observation showed this to be an epithelioma of the larynx. The glands on both sides of the neck were enlarged. The pain was not very severe, but deglutition was performed with considerable difficulty. Breathing was easily carried out, but the patient was warned that if obstruction to the respiration set in

tracheotomy would have to be performed. On the 30th May, the patient was brought to my house suffering from severe dyspnoea, and he was immediately ordered to the Glasgow Training Home, where the operation of tracheotomy was performed. His recovery from this was so good that he could be sent home within twenty days, when the pain practically disappeared, deglutition improved as the inflammatory condition of the larynx somewhat diminished, and the patient steadily increased in weight.

The subsequent history of the case was extremely satisfactory upon the whole, as he was able to conduct his business as usual. The patient lived until 4th July, 1891, in comparative comfort and with little pain until three weeks before his death.

Remarks.—The interest in this case lies in the duration of life subsequent to the recommendation to have laryngotomy performed, and the course taken was the patient's own choice, after both sides of the question had been laid before him. Had this operation been performed the subsequent duration of life over three years and a half would have been considered an excellent result. The case is not cited in opposition to the recommendation of total extirpation of the larynx in such cases, but in weighing the advantages for and against such a course it would be advisable to have an accurate record of all such.

A PRELIMINARY DRILL FOR LARYNGOSCOPY.

DUNDAS GRANT, M.D., F.R.C.S. Eng.

FROM the frequency with which one meets in reports of cases the statement that "laryngoscopic examination was impossible," owing to the restlessness of the patient or various other circumstances, it appears to me that the description of a method which has enabled me to succeed in effecting laryngoscopy in cases which *to me* were most trying, both to patience and skill, may not be unwelcome. I feel deeply conscious that many readers of this Journal would devour with avidity, perhaps not unmingled with envy, the description of an unusual microscopical section or of the "rein cultur" of a hitherto unclassified and exceptionally malignant bacillus, but I write for those who in scientific humility are anxious for a little practical and scientific (in the sense of being true) assistance over one of the stumbling-blocks of the aspiring laryngoscopist.

I do not intend to revert to the common-places of laryngoscopic examination, which are so well formulated in our standard text-books. In Morell Mackenzie's and Lennox Browne's works most excellent rules are laid down, and the beginner will often find that his failures in laryngoscopy are due to his having broken one of those rules. At the same time experience soon shows him that he has to acquire empirically or deductively certain amplifications of these rules adapted to his patient's or his own "personal equation."

Supposing all the attendant circumstances to be as favourable as possible, the examiner will have to depend a good deal upon the patient doing

at the moment exactly what he tells him, and this is often exactly what the patient cannot or will not, or, at all events, does not do. Habits of discipline and instant obedience do not appear to be inherent in all natures, and this is a difficulty to be overcome only by the unapparent exercise of authority and tact. The examination of a trained soldier is often rendered extremely easy through the involuntary obedience to the word of command, but how often is the examination of the female larynx embittered by the recalcitration of the fair owner!

Apart from the unwillingness of the patient there is often an utter inaptitude to understand what the doctor requires. To many people it is most difficult to inspire and expire or phonate to order. In such cases I often find that much time is saved by a little patient instruction in carrying out the instructions,—“breathe gently in and out,” “say hah!” “draw breath.” This having been overcome, the larynx may be seen for a moment—and I must reiterate the well-worn statement that the early laryngoscopic examination should be of the briefest possible duration though repeated several times. In point of fact, it is a good rule on the first introduction of the mirror merely to insert it for a moment into the back of the mouth, and then to remove it without having necessarily made any serious attempt to see the larynx, but *on no account to appear to the patient disappointed at not having done so*. The examination can usually be accomplished easily and confidently on a second introduction.

We find in the “Rules” that the examination of the interior of the larynx is much facilitated by the patient uttering a note in the “falsetto” (*sit venia verbo!*) “head,” or “thin” register. Now the difficulty is to get an untutored patient to do this. Vocalists do it without difficulty, and many adaptable patients can do it by imitation. There is no question in my mind that the power of communicating this accomplishment to the patient is of unspeakable value to the laryngoscopist and well worth the trouble of acquiring. If the patient can be got to utter the sound “heh” to a head-note, the knot of the difficulty is generally cut. This sound is not familiar to the English throat; it is like the vowel of the word “hell” long-drawn out, the “meh” of the sheep, the “ê” of the French “*bête*”, or the Scotch exclamation of surprise “Eh!” During the utterance of this sound the larynx is raised into a more favourable position for inspection than when the vowel “ah” is produced, and the mouth is not closed to such an extent as during the emission of the sounds “ay” or “ee.” I should advise those “who have not had the advantage of being born north of the Tweed” to acquire the art of pronouncing this vowel.

This being pre-supposed, it remains to get the note uttered on the “head” (“thin”) register, and this is really the *crux* of the “preliminary drill.” Those who cannot hit off a falsetto note at once may succeed if they commence singing a scale as softly as possible. At a certain stage they will notice the character of the tones alter, and the sense of effort at production become less. They will find themselves using the “thin” register. One method then is to make the patient sing the vowel “eh” very softly up the scale, and when he has reached the “thin” register to make him halt sing several times the note required, and, finally, to emit it “with a will” when the mirror is introduced.

There is yet another method of "dodging" a patient into the use of the "head voice." Patients who are insusceptible to musical methods may succeed in producing a head-note by imitating a little girl calling to her kitten, "Puss, puss, puss," on a very high-pitched note. Others may pick up the comic singer's method of testing his head-register by trying to reproduce the voice of an irate woman, shouting "Eliz-ah!" the last syllable being pronounced on a high falsetto note. The grotesque effect of this proceeding is very "catchy" and often overcomes the difficulty, the transition to the sound "eh" being easy when once the patient has caught the idea.

I may be met finally with the objection that in cases of destruction of the vocal cords and other conditions the productions of the sounds described may be impossible. The reply to this is that it is not so much the actual production of the sound as the attempt to do so that is required.

To those whose earlier or isolated attempts at laryngoscopy have been attended with difficulty, I offer these suggestions with the sympathy and best wishes of a somewhat "old hand." To those "heaven-born" laryngoscopists who have never experienced any difficulty, I offer my humble and admiring congratulations.

NEW INSTRUMENTS, THERAPEUTICS, DIPHTHERIA, &c.

Killian (Friburg-a-Br.)—*Contra-Laryngoscope*. "Münchener Med. Woch.," 1891, No. 33.

By application of a second mirror before the reflector, a second examiner can see the larynx together with the first. *Michael.*

Harke (Hamburg).—*New Mirror for the Naso-Pharynx and Larynx*. "Deutsche Med. Woch.," 1891, No. 28.

SEE the report in this Journal. *Michael.*

Jankau (Strassburg).—*Mirror for Examination of [the Cavum Pharyngo-Nasale]*. "Deutsche Med. Woch.," 1891, No. 35.

By a second mirror introduced into the nose during rhinoscopia posterior the ossium tubæ Eustachii can be seen *en face*. *Michael.*

Helbrig.—Mittelfränkischer Aerztetag in Fürth, Meeting, June 20, 1891.

EXHIBITED the newest apparatus for illumination. *Michael.*

Hinkel (Buffalo).—*Scissor Forceps for the Removal of Adenoid Tissue from the Vault of the Pharynx*. "New York Med. Journ.," April 4, 1891.

THESE forceps are for operation on adults in whom there is space for their introduction into the naso-pharynx, with their wide blades lying

antero-posteriorly. That they shall cut antero-posteriorly is alleged by the author to be necessary in adults, because the tissue to be removed lies in folds in this direction; also they have a scissor action from one fenestra lying over the other. They are not so easy to use in children, even under general anæsthesia, unless the palate be tied forward.

B. J. Baron.

Huber.—*Nutritive Value of Rectal Injections of Egg Albumin.* "Medical Chronicle" in "Med. Record," July 4, 1891, p. 14.

EGG albumin simply beaten up is absorbed in very small quantity, and therefore of very little nutritive value. *If to each egg fifteen grains of common salt be added*, sixty to seventy per cent. is absorbed, and we have an extremely valuable material for nutrient enemata. *Dundas Grant.*

Hankin, E. H. (Cambridge).—*On Immunity.* "Lancet," Aug. 15, 1891.

THE author reviews the various theories explanatory of the existence or acquisition of immunity against diphtheria and other infectious diseases before advancing his own most recent opinions. Nuttall, in 1888, discovered that various bacteria were destroyed when mixed with fresh blood or serum, apart even from the cellular elements, and the bactericidal action of the cell-free blood-serum was made of still greater importance by Buchner and Nissen. Bouchard found this action to be much more powerful in animals made artificially immune (as by inoculation of attenuated virus or otherwise). Emmerich and Mastbaum found it curative in cases of animals already suffering from the disease investigated by them—pig-typhoid. Behring and Kitisato, investigating tetanus and diphtheria last year, found that in these diseases the microbes themselves did not spread through the body, but that the serious poisonous effects were produced by toxic agents elaborated by the microbes. These might diffuse themselves, and poison the system, even after the last specific microbe had disappeared (witness diphtherial paralysis). Hence a substance (as present in the blood-serum of the rat) capable of destroying the diphtheria bacillus might yet leave the already diffused poison untouched, as indicated by Fraenkel and Behring, who have found that scarcely any tolerance can be obtained by repeated inoculation of minute doses of the unaltered diphtheria virus. Behring and Kitisato have shown that in the serum of a diphtheria-immune rabbit, there is an element which does not destroy the diphtheria bacillus, but destroys the poison engendered by that microbe. This leads to a new theory of immunity, which Hankin thus states:—"Immunity, whether natural or acquired, is due to the presence of substances which are formed by the metabolism of the animals rather than by that of the microbe, and which have the power of destroying either the microbe, against which immunity is possessed, or the products on which their pathogenic action depends."

Hankin attributes the bactericidal action of blood-serum to the globulin "B" contained in it, and places it among what he calls *defensive proteids*. He has strengthened his position by proving that in refractory animals (as the rat in respect to anthrax) the defensive proteid is present in a more active form, or in a larger quantity, than in those that are susceptible.

Hankin suggests the use of the term "sozins" for the defensive proteids

naturally present in normal animals, "phylaxins" for those occurring in animals artificially rendered immune. If the proteid destroys the microbe he adds the prefix "myco-," but if its action is on the poison, "toxo-." Thus: "myco-sozin" and "toxo-sozin," "myco-phylaxin" and "toxo-phylaxin."

Dundas Grant.

Bürkner (Göttingen).—*Aristol in Diseases of the Nose and Ear.* "Berliner Klin. Woch.," 1891, No. 28.

In aural diseases the author has obtained no good effects with the medicaments, but in cases of ozæna and of nasal syphilis the results were very satisfactory.

Michael.

Kessler (Dorpat).—*Acute Iodism.* "St. Petersburger Med. Woch.," 1891, No. 27.

AFTER the introduction of a glycerine iodide of potash tampon into the vagina for oophoritis the patient experienced a bitter taste in the mouth, exhibited aphonia, dyspnoea, palpitations, vertigo, and subjective smell of iodine. After some days, improvement occurred, followed by cure. [The supposed œdema of the glottis was not confirmed by laryngological examination.]

Michael.

Petersen (Wurzburg).—*On Cresol-iodide.* "Münchener Med. Woch.," 1891, No. 30.

THE author has made experiments with this new medicament in Seiffert's clinic, and recommends it as a good application for diseases which are combined with increased secretion, such as rhinitis hyper-secretoria, eczema narium, etc.

Michael.

Johnson, Walter B. (Paterson, U.S.).—*Quick Action of Drugs.* "Med. Record," from "Medical World."

ADMINISTRATION in hot water is recommended as leading to speedy absorption by the stomach, chilling of that viscus by the action of cold fluids having been shown to delay absorption.

Dundas Grant.

Johnson, Walter B. (Paterson, U.S.).—*Cold in the Head.* "Med. Record," July 4, 1891, p. 24, from "Med. Compend."

A GOOD dose—ten minims of the fluid extract—of gelsemium at bedtime is said to be sufficient in most cases to cure cold in the head in the congestive stage.

Dundas Grant.

Adamkiewicz (Krakau).—*On the Reactions of Cancers and their Cure.* Akademie der Wissenschaften in Wien, Meeting, July 2, 1891.

THE author has for some time been trying a new treatment of carcinomata. He has not yet described his method, but only reports its results:—(1) Carcinoma of the breast improved. (2) Carcinoma of the stomach improved. (3) Carcinoma of the tongue, on left half, with large glandular tumours of the neck. Under the treatment strong reaction occurred in the tumour itself, and the glands decreased. (4) Carcinoma of the œsophagus. Nearly imperforable stricture. A little piece remaining attached to the catheter was found to be cancerous. Some days after the

treatment the patient could swallow solid food, and some weeks later the improvement was still reported. (5) Carcinoma of the larynx. A patient, forty-four years old, a year ago had tracheotomy performed for carcinoma. There now existed infiltration of the right ventricular band and metastases in the neck. The metastases have disappeared under the treatment. The author concludes that his treatment (injections of a fluid called "cancrom") is the first effective method of treating cancers. *Michael.*

Walker, Geo. G. (Liverpool).—*Recovery from Apparent Death from Chloroform.* "Lancet," Aug. 22, 1891.

THE patient, a child, appeared to be quite dead, pulse and respiration having suddenly ceased at the same time, according to the administrator. Mr. Walker practised artificial respiration, while a bottle of nitrate of amyl was held to the patient's nose. The child recovered, but without the nitrate of amyl Mr. Walker feels certain that no efforts could have averted a fatal result. It appears that the patient had several times previously taken chloroform extremely well, the usual rules with regard to abstinence from food having been followed; but on this occasion, in spite of precautionary orders, the child had succeeded in eating an apple, the core, stalk, and part of the skin of which she vomited up on becoming conscious. [As in operations on the upper air-passages, it is eminently desirable to employ chloroform rather than ether narcosis, if possible, it is advantageous to keep well before our minds these elementary conditions of danger and of safety, which from carelessness, hurry, or over-confidence we may only once too often overlook.] *Dundas Grant.*

Hagedorn (Hamburg).—*Galvano-Caustic Treatment of Diphtheria Faucium.* "Deutsche Med. Woch.," 1891, Nos. 28, 29.

SEE the report in this Journal.

Michael.

Deichler (Frankfurt-a-M.).—*On Whooping Cough.* Naturforscher Versammlung, 1890.

DESCRIPTION of micro-organisms which the author has found in the sputum of whooping cough similar to those described by Affanasiew. He believes that they are the cause of the disease. *Michael.*

Rosenberg.—*On Intubation of the Larynx.* "Berliner Klin. Woch.," 1891, No. 25.

SEE the report of the Berliner Med. Gesellschaft, May 18, 1891.

Michael.

Pfeiffer (Wien).—*Report on the Treatment of Croupous Laryngeal Stenosis, treated by O'Dwyer's Intubation.* "Wiener Med. Woch.," 1891, No. 32.

THE cures by tracheotomy for croup at the Sechshaus Hospital were, for the last six years, thirty-four per cent. In the last three months fifty-two cases of croup and diphtheria have been treated; eighteen of these cases were treated by intubation (fifty-five-and-a-half per cent. cures). Nine tracheotomized all died. Of eighteen cases treated without tracheotomy and intubation seven died. The author believes that intubation often can be performed instead of tracheotomy. *Michael.*

Trest.—*Mortality of Croup, Diphtheria, and Whooping Cough in Austria, and its Relation to the Mortality of Measles and Scarlet Fever.* "Therapeut. Monats.," 1891.

DURING fifteen years from 1873 to 1887, of 10,000 men, there died from measles, 51; scarlet fever, 67; whooping cough, 112; diphtheria, 168.

Michael.

Kroznecow.—*Treatment of Diphtheria.* "Allgem. Med. Central. Zeitung," 1891, No. 60.

THE author brushes the diseased parts with \mathbb{R} menthol, 375, dissolved in alcohol, sol. naphthalini, 375, ol. thereb. glycerini, āā 75. For internal use he prescribes antipyrin and benzoate of soda dissolved in aq. menth. pip.

Michael.

Bodnar.—*On the Treatment of Diphtheria.* Königliche Gesellschaft der Aerzte in Buda-Pesth, Meeting, March 23, 1891.

THE author recommends inhalation with salt water and brushing with chloride of iron, and the internal use of quinine.

Michael.

Bundy (Boston).—*Two Cases of Diphtheria.* "Boston Med. and Surg. Journ.," March 26, 1891.

THE author recounted his treatment of these cases to the members of the Boston Society for medical observation. It consisted of the internal administration of perchloride of mercury in large doses, of sulpho-calcine, perchloride of iron, antipyrin for fever and restlessness, and Dover's powder to procure sleep. Gargles of boric acid and chlorinated soda, and a spray of sulpho-calcine, were also prescribed, with abundant nourishment. One boy died of cardiac paralysis; the other recovered. The author lays stress on constitutional treatment, and would only use local measures if they can be easily carried out.

Nothing important was elicited in the discussion that followed.

B. J. Baron.

Mayer (Aachen).—*On Diphtheria.* Naturforscher Versammlung in Bremen, 1890, Pediatric Section.

THE author recommends the internal and external use of ice. *Michael.*

Betz, Friedrich.—*Etherization in Croup.* "Med. Record," July 11, 1891, p. 54, from "Memorabilien," April 18, 1891.

A CHILD, aged thirteen months, apparently moribund, recovered after having been made to inhale, every fifteen minutes, three drops of the following:—Menthol, one and a half grain; acetic ether, fifteen minims; sulphuric ether, forty-five minims. For older children he would increase the proportion of menthol.

Dundas Grant.

Hoophaus (Kiel).—*On Diphtheritic Paralysis.* "Virchow's Archiv.," Bd. 124, Heft 2.

IN the paralyzed muscles is always found inflammation, especially localized in the connective tissue, but also in the muscle fibres themselves; there is always a smaller degree of interstitial inflammation of the nerves. The central organs are healthy. It is declared that the electrical examination

of the paralyzed muscles only shows quantitative but not qualitative variations from the healthy muscles. There were in no cases paræsthesiæ. The anæsthesia of the pharyngeal muscles is proved by the exudation into the muscle and mucous membrane which presses upon the neighbouring nerves.

Michael.

Ranke (Wien).—*Tracheotomy and Intubation in the Treatment of Croup and Diphtheria.* Naturforscher Versammlung in Bremen, 1890.

THE result of a collective investigation by ten authors is that intubation is inferior to tracheotomy. Only in the first year of life does intubation give better results than tracheotomy. In the discussion—

WIDERHOFER (Wien) stated that he had seen some cases of decubitus (pressure ulceration) from intubation, and also cases of cicatricial stenosis produced by it, so that tracheotomy had to be performed on account of these.

HAPPE (Hamburg) recommends the ice treatment of diphtheria; also EHRENHAUS (Berlin); but THOMAS (Freiburg) believes that the ice treatment must be applied alternately with other treatments.

PAULI (Lubeck) recommends diaphoretic treatment. He also refers to his experiences with intubation, and says that it cannot at all compare with tracheotomy, and that he has therefore abandoned the method.

Michael.

Johnson, Walter B. (Paterson, U.S.) — *Intubation of the Larynx, with a Report of Eighteen Cases.* "Med. Record," July 4, 1891, p. 21.

IN the abstract of a paper read before the Medical Society of the State of New Jersey are given sixteen advantages of intubation over tracheotomy. The eighteen cases occurred during seven months, the severer part of an epidemic at Paterson. Three only of the eighteen recovered, but in all there was very gratifying relief from dyspnœa. [In the abstract there is no mention of the disadvantages of intubation, and the advantages enumerated are those already well known, but less favourably appraised.]

Dundas Grant.

TREATMENT OF TUBERCULOSIS.

LIEBREICH'S METHOD.

POLYAK—Gesellschaft der Aerzte in Buda-Pesth—showed a patient with tuberculosis of the larynx and the lung. He made injections of 0·001—0·002. The larynx was improved after ten injections, but there were some signs of intoxication, such as strangury, headache, and fever.

HOCHHALT also had made experiments. The voice became somewhat better, but the general health was deteriorated.

IRSAY saw, in consequence of the application, hæmoptysis and œdema glottidis.

NAVRATIL saw fever in his cases, but no local improvement.

RENNENKAMPF (Dorpat)—"St. Petersburger Med. Woch.," 1891, No. 25—has treated sixteen cases of pulmonary tuberculosis with the injections. Six of these cases were combined with laryngeal tuberculosis,

(1) A patient, twenty-seven years old, with aphonia, swelling of the arytenoid cartilages, and ulcerations of the vocal bands. After seventeen injections, no change in the larynx, and general health deteriorated. (2) A patient, twenty-seven years old, with swelling of the inter-arytenoid fold. After seven injections, no change in the larynx. General health deteriorated. (3) Catarrhal changes in the larynx—sixteen injections. In the larynx no change. Deterioration of general health. (4) Chronic catarrhal changes in the larynx. After twelve injections, no change. (5) A patient, twenty-nine years old, with tubercular infiltration of the posterior wall. After nineteen injections the infiltrations disappeared; the voice became loud and clear. General health not changed. (6) A patient, twenty years old, with great hoarseness, chronic catarrh, and swelling of the inter-arytenoid region. After ten injections, improvement of the voice, and of the general health. *Michael.*

The Tuberculosis Congress.—(Paris Correspondent of the "Lancet.") "Lancet," Aug. 22 and 29, 1891.

Avian Tuberculosis.—M. Vignal has found that the tuberculosis of birds is caused by a bacillus of its own, distinguishable from that of human tubercle. The pheasant is insusceptible to human bacillary inoculation, the dog insusceptible to the avian bacillus. Guinea-pigs and rabbits have the misfortune to be susceptible to both, the bird's producing in them, however, a form of septicæmia rather than phthisis.

The Dog-Serum Treatment.—The idea that dog's or goat's serum was antidotal to tubercle in the human being has been deprived of much of its probability by the successful inoculation of these animals, and Verneuil ascribes to psychical impressions the partially beneficial results obtained by Richet and Héricourt. Semmola, of Naples, got no good result unless the treatment was adopted simultaneously with the internal administration of iodoform in doses of one-third of a grain every two hours. Pinard, on the other hand, believes in and pursues the treatment in cases of children of tuberculous mothers weighing less than two kilogrammes.

The Hereditary Nature of Tuberculosis.—Experiments were reported in which animals were inoculated with sputum, &c., of tuberculous mothers on the one hand, and with fragments of placenta and organs of the still-born offspring of such mothers on the other hand. The negative results in the latter case, as compared with the violent positive results in the former, seemed to demonstrate that it is only the "soil" which is transmitted from parent to child, not actual tuberculosis.

Verneuil's Iodoform Treatment.—Professor Verneuil, an active opponent of Koch's method, recommended strongly the internal and local administration of iodoform, and the postponement of operative measures. He recalled Gosselin's experiments on guinea-pigs, which showed that these animals when slowly saturated with iodoform were incapable of inoculation with tubercle as long as the iodoform saturation was kept up. Verneuil gives small daily doses (one grain) for an indefinitely prolonged period. Toxic effects are guarded against by the examination of the urine every two days. This is supplemented by appropriate local use of the

drug. Thus, he injects into non-suppurating tuberculous glands, half a "Pravaz" syringe-ful (fifteen minims) of a five per cent. ethereal solution of iodoform once a week. Under this treatment he finds glands shrivel up and become almost imperceptible, without scar. For broken-down glands and cold abscesses he employs aspiration, followed by injection of the cavity with the iodoform solution through the canula *in situ*. In cases of osteitis, osteoarthritis, or visceral tuberculosis complicated with fistula, the solution is injected through the tract twice a week. In closed tuberculous cavities, such as joints, he never injects more than 100 grammes of the solution. The cavity becomes distended with ether vapour, and some pain results. This, however, ceases when some of the vapour is allowed to escape by the canula, but the iodoform is distributed on every point of the internal surface. Under this plan of treatment, Verneuil reports frequent cures of large abscesses (lumbar, psoas, &c.) in one or two sittings. Glycerine is substituted for ether in cases of empyema, as the distension of the pleural cavity with ether vapour sometimes occasions attacks of dyspnœa. [These brilliant results must certainly command attention.] *Dundas Grant.*

MOUTH, PHARYNX, &c.

Schmiegelow (Copenhagen).—*New Bacteria found in the Mouth.* "Monats. für Ohrenheilk.," 1891, No. 4.

IN a case of pharyngo-mycosis the author found a bacterium not yet described and called it "bacillus anthracoides buccalis." *Michael.*

Fraenkel, Eugen (Hamburg).—*On Bednar's Aphthæ.* "Centralbl. für Klin. Med.," 1891, No. 29.

BEDNAR'S aphthæ are a classical example of a so-called mycotic epithel-necrosis, caused by invasion of bacteria in the covering epithelium of the palate. Combined with it is a solution of the necrosed epithelium, so that a true ulceration arises in consequence of this. Other micro-organisms can enter and produce a mixed infecture, *Michael.*

Fessler.—*Common Septic Processes propagated from the Mouth.* Verein Bayrischer-Zahnerzte, 1890.

INJECTIONS by loss of substance of the oral mucous membrane, by gangrenous pulp, wounds from tooth extractions, periodontitis, necrosis, phlegmon, can be propagated on to the organs of respiration or digestion. As prophylaxis, he recommends antiseptic gargles. *Michael.*

Miller, W. D. (Berlin).—*The Human Mouth as a Focus of Infection.* "Lancet," Aug. 15, 1891.

DR. MILLER brings forward reasons for supposing that "many diseases whose origin is enveloped in mystery, if they could be traced to their source would be found to have originated in the oral cavity."

Dental caries may lead to diseases of the pulp and peri-cementum and alveolar abscess (sometimes fatal). Croupous pneumonia is believed to

be caused by a species of micro-organism constantly present in the sputum of persons suffering from pneumonia and very frequently even in the saliva of quite healthy persons. The micrococcus of "sputum septicæmia" is credited with invasive properties of the highest order, and may occasion parotitis, multiple subcutaneous abscesses, tonsillitis, otitis media, abscesses of the mastoid process, peritonitis, meningitis, and other infections.

Owing to the multiplicity and variety of the micro-organisms present in the mouth simple microscopical examination is useless. Cultivations on agar agar and on gelatine also fail of their purpose, and investigators are thrown back upon the animal body for the purpose of isolating the pathogenic micro-organisms present at the time in the saliva. Of one hundred and eleven mice into whose abdominal cavities oral saliva was injected all but ten died in from fifteen hours to thirty days. In nearly all the cases fatal within five days there was acute peritonitis or blood-poisoning or both, whereas in most cases not fatal within this time no organisms were found in the blood, and death was due to local suppurative processes alone. Thus two grand sub-divisions were made, those causing blood-poisoning and those causing local suppuration. Out of the one hundred and eleven cases, capsulated diplococci—micrococci of sputum-septicæmia—were found in the blood of fifty-eight, and besides these, in the peritoneal exudations of three. Immunity was only obtained by simultaneous injection of 0.3 cem. of a 1 per cent. solution of trichloride of iodine.

To prevent the undue growth of bacteria—pathogenic and non-pathogenic—in the mouth he thinks many of the most used washes are useless. For disinfecting the mouth in cases of acute disease, stomatitis, diphtheria, gangrene of the mouth, &c., of the usual borax, boracic acid, chlorate of potash, permanganate of potash, lime water, and salicylic acid, the last is the only one possessing any powerful direct influence on the bacteria. Corrosive sublimate (1 in 2000) effected a marked diminution in the number of germs in one minute, complete sterilization requiring on an average five minutes. The addition of benzoic acid greatly increased the efficacy of the sublimate. Trichloride of iodine (1 in 2000) was superior to the sublimate and quite pleasant, but unsuitable for continuous use, owing to its acid reaction.

Finally he recommends as a mouth wash: *R.* acid benzoic, 3.0; tinct. eucalypti, 15.0; alcohol absol., 100.0; ol. menth. pip., 0.75 (*sic*). [We presume 3 parts are to be added to 27 parts of water]. *Dundas Gr ant.*

Plant (Syracuse).—*Affections of the Mouth in Children.* "The American Lancet," April, 1891.

THRUSH occurs only if the secretions of the mouth are *acid*, and is rarely seen in breast-fed babies. In older children it is an accompaniment of some lingering, wasting disease—*e.g.*, phthisis. In treating this condition we must secure alkalinity of the buccal secretions, and watery solutions of borax or sulphite of soda, with glycerine, if there be no inflammation, and the same drugs, combined with chlorate of potash, if it be present, gargled or swabbed on, and taken internally, fulfil this indication. To

keep the mouth alkaline, swabbing with lime-water, or solutions of bicarbonate of soda at short intervals, combined with perfect cleanliness of the feeding-bottle, etc., is recommended. For stomatitis, chlorate of potash and iron are to be taken, and also used as a gargle, and the bowels regulated. In ulcerative stomatitis, sprays of weak watery solutions of Condy's fluid, carbolic acid, boric acid, or sulpho-carbolate of soda, combined with cold milk diet, regulation of the bowels especially to overcome acidity, and the administration of chlorate of potash, iron, and bark are curative.

B. J. Baron.

Mandelstamm (Kiew).—*Casuistics and Diagnosis of Pemphigus of the Mouth, Pharynx, and Larynx.* "Internat. Klin. Rund.," 1891, No. 35.

THE author has observed five cases of the disease. All cases were very chronic, and there were no bullæ of the skin. In the fifth case, some months after the beginning of the laryngeal pemphigus, a pemphigus of the skin arose. The disease in all cases had the same symptoms as described by Irsay. The mucous membrane was covered firstly with bullæ, and, if these are lacerated, with a great deal of white epithelium, often looking like diphtheria. They differ from this by the chronicity and absence of fever from stomatitis mercurialis, and by the absence of inflammatory symptoms. The therapeusis was without any effect.

Michael.

Campbell (Hamburg).—*A Case of Crypto-Genetic Septicæmia.* "Deutsche Med. Woch.," 1891, No. 35.

A PATIENT, seven years old, experienced difficulties in swallowing and turning the head. There was redness and swelling of the palate, and swelling of the cervical glands. Next day redness of the skin of the face and diarrhœa. In the following two days delirium, difficulties of moving the head and neck, anuria, vomiting, loss of weight, headache, irregularity of pulse and respiration, followed by death. The *post-mortem* examination showed glomerulo-nephritis of the right kidney, and an abscess of the size of a walnut in the retro-pharyngeal space. In the blood of the kidneys, in the erysipelatous parts of the skin, and in the abscess a very large quantity of streptococci were found, which must be looked upon as the cause of the disease.

Michael.

Baker, Morrant.—*Two Cases of Submaxillary Cellulitis.* "Lancet," Aug. 22, 1891.

THE first was a man, aged thirty-seven, who had some teeth extracted two days before admission. The swelling extended across the throat, which was very painful, and there was great difficulty in swallowing. On admission the patient had a large hard swelling of all the tissues in the submaxillary region, extending from the lower jaw to the thyroid cartilage, and laterally to the parotid region on both sides of the face. The mouth could be opened only to a very slight extent, and the tongue could not be protruded, while the mucous membrane of the floor of the mouth was pushed up to the level of the lower teeth. The voice was croupy, and the patient had difficulty in ejecting the mucus which accumulated in his mouth. The temperature was 102° 8°. Chloroform was given with great

caution owing to the tendency to laryngeal obstruction, and operative interference was promptly carried out. An incision about an inch in length was made immediately under the chin, and after penetration for some little distance the knife was discarded for the steel director. The fore finger had to be forced through the tissues for its whole length before an abscess cavity was reached, and about three ounces of offensive pus evacuated. A wire drain was inserted, and boracic fomentations were applied. The temperature fell to 99.2°, and the patient was nearly well in a week.

In the second case, a boy of fifteen was in a similar condition, the cause being apparently disease of the right second lower molar. A similar incision did not lead to the discovery of pus, but a wire drain and boracic fomentations were again used. No immediate improvement took place, but in a few days pus began to escape from the wound, the swelling diminished, and the patient soon recovered.

These cases illustrate the prompt treatment required in this disease, incision being called for even before the formation of pus. The dental origin of some cases of angina Ludovici is also of importance.

[To those who have observed the occasionally formidable results of angina Ludovici under more expectant treatment, the report of these cases will be of the greatest interest. It will be remembered that in disease of the ear there may be another cause for the "idiopathic" cellulitis possibly undetected or detected only on the *post-mortem* table.]

Dundas Grant.

Irsay (Buda-Pesth).—*Pemphigus of the Upper Air Passages.* "Internat. Klin. Rundschau," 1891, Nos. 28, 29.

A PATIENT, thirty-two years old, hoarse for three months, had bullæ on the soft palate and the cheeks. The bullæ burst, and then a discharge of bloody serum followed. Similar bullæ occurred on the skin of the patient. The laryngoscope showed that on the epiglottis were two places showing loss of substance caused by bursting of bullæ.

Michael.

Sendtner (München).—*Etiology of Angina Follicularis.* "Münchener Med. Woch.," 1890, No. 26.

THE pus in four cases of angina follicularis carefully examined by the author always contained the streptococcus pyogenes. This bacterium is the cause of the disease, and in rare cases also causes malignant consequences, such as pyæmia and erysipelas.

Michael.

Thorner (Cincinnati). — *Severe Secondary Hemorrhage after Tonsillotomy.* "The Cincinnati Lancet-Clinic," May 2, 1891.

THIS occurred in a young man, aged twenty-five, two of whose brothers had suffered from a good deal of bleeding—one directly after the operation, and the other two days afterwards. The operation was performed with a Mackenzie's guillotine, and the bleeding became alarming two days after, a thin stream of blood spurting from the upper edge of the tonsil; torsion stopped it, but on the patient lying down it began again. Making him sit up in bed, and covering the wound with gallo-tannic acid, finally checked it.

B. J. Baron.

Homans (Boston, U. S. A.).—*Sarcoma of the Tonsil Removed by External Incision.* "Lancet," Aug. 29, 1891.

A FEMALE patient, aged fifty-nine, had for eighteen months been troubled at long intervals with swelling and ulceration of the right tonsil. A portion was removed by means of the tonsillotome, and the pathologist reported it as follows: "An irregularly lobulated growth, homogeneous and medullary looking on the section surface. Microscopic examination showed a structure of relatively large round cells, with fine fibrillated intercellular substance replacing the normal tonsil structure. In places there were relatively dense bands of fibrous tissue traversing the growth irregularly. The diagnosis is a round-celled sarcoma." The growth soon re-appeared, and the right tonsil became twice the size of the left, not inflamed, and having projecting from its centre a soft red mass of about the size and colour of a wild strawberry, and shaped like a pineapple.

An incision was made two inches and a half long, "from the right side of the hyoid bone to the mastoid process." The fasciæ were divided, the parotid pushed up, the submaxillary gland and digastric tendon downwards. The constrictor and mucous membrane of the pharynx were scratched through with a director. Scissors were used in the mouth to divide the pillars of the fauces and the mucous membrane round the tonsil. By means of forceps introduced through the wound into the pharynx the loosened tonsil was pulled out, while its internal attachments were severed from inside.

Only two small vessels required ligature. The pharynx was stitched with continuous silk suture, a quill drain was left in the external wound, which was dressed with a compress of iodoform gauze. She had a mouth-wash of permanganate of potash, and for three days was fed solely by nutrient enemata every four hours. On the fourth day she took three ounces of milk every four hours. On the fifth the external wound was whole, and the drainage tube was removed. The stitch in the pharynx was easily removed on the fourteenth day, and the patient was discharged well. [The writer admits that the patient might have been treated through the mouth, and his reasons for external operation do not seem very convincing. The absence of any external swelling seems to be a reason for operating from within with every hope of success, certainly for starting from within and reserving external incision till the internal exploration showed its necessity.]

Dundas Grant.

Hoag (Grand Rapids).—*A Case of Chronic Pharyngitis.* "Journ. of Ophthalm., Otol., and Laryngol.," April, 1891.

HERE there was stenosis of both nostrils, with enlarged veins in the pharynx. The stenosis was remedied by operation, and an application was made night and morning of

Ergotin.....	gr. xvij.
Tinct. iodi	ʒi.
Glycerine	ʒi.

Cure resulted. [How much is ascribable to the treatment of the nose, and how much to the pigment?—*Ref.*]

B. J. Baron.

NOSE AND NASO-PHARYNX.

Suchannek (Zürich).—*Differential Diagnostic Signs of Differentiation between Normal and Pathological Human Olfactory Epithelium (Respiratory Ciliated Epithelium)*. "Monats. für Ohrenheilk.," Bd. 22, Heft 1, 2.

THE results of many carefully-made microscopic examinations must be seen in original. *Michael.*

Suchannek (Zürich). — *Pathologico-Anatomical Studies on Rhinitis Acuta, especially Influenza-Rhinitis*. "Monats. für Ohrenheilk.," 1891, No. 4.

IN such cases in which microscopically only hyperæmia was seen, only this condition could be observed with the microscope in little pieces excised with scissors. If there was intumescence, beginning desquamation could be observed microscopically, also laceration of vessels and œdema. The regeneration of the destroyed epithelium is perfect in a short time. On the ends of the nerves there is no change. *Michael.*

Onodi (Buda-Pesth).—*Rhinitis Fibrinosa Chronica*. "Monats. für Ohrenheilk.," 1891, No. 4.

SEE the report of the X. International Congress. *Michael.*

Kieselbach (Erlangen).—*Respiratory Impediments in the Nose*.

IN operations for this purpose, always, if possible, cutting instruments must be preferred to the galvano-cautery. *Michael.*

Pins (Wien).—*New Method of Irrigation of the Nose*. Congress für Innere Medizin, 1891.

THE apparatus consists of a bottle with double perforated cork and two glass tubes. One of them ends in an olive. The olive is inserted into the nose, while the patient blows into the other tube. The fluid contained in the bottle enters the nasal cavity in which is the olive, and comes out by the other orifice. *Michael.*

Lenzmann (Duisburg).—*On the Injury caused by Obstructed Nasal Respiration upon the Development of the Child*. "Sammlung Pädagogischer Vorträge," Bd. 3, Heft 6.

A POPULAR essay written for teachers. *Michael.*

Bresgen (Frankfurt a-M.).—*On the Injury caused by Obstructed Nasal Respiration in the Development of Body, Mind, and Speech of Children*. "Monats. für d. Gesamte Sprachheilkunde," 1891, No. 7.

A POPULARLY-WRITTEN essay, containing the well-known views of the author on this subject. *Michael.*

Gottschalk (Berlin).—*Case of Anosmia following the Extirpation of both Ovaries*. "Deutsche Med. Woch.," 1891, No. 26.

BOTH ovaries were extirpated from a lady, thirty-six years of age, on account of a uterine myoma. One year later, when the artificial climacterium was completed, the patient related that she had entirely lost the

ability to smell. The examination showed that she could not smell at all. There was also spinal irritation and some other climacteric symptoms. The author believes that there is a relation between the climacterium and the anosmia. Up to now no similar case has been published. *Michael.*

Jankau (Strassburg-i-E.).—*Hemiatrophia Facialis Progressiva*. "Deutsche Med. Woch.," 1891, No. 26.

IN a lady, twenty-two years old, the right half of the face had become atrophic without any apparent cause within six months. Now the examination shows: Pallor of high degree with yellowish pigmentation and atrophy of the right side of the face. Enlargement of the thyroid gland, pharyngitis sicca and ozæna. The author agrees with most others that the disease is of neurotic origin, especially of the trigeminus. *Michael.*

Peltesohn (Berlin). *Spasm of the Face cured by Treatment of the Nose*. "Berliner Klin. Woch.," 1891, No. 32.

COMPARE the report on the Berliner Laryngologische Gesellschaft.

Michael.

Teets (New York).—*Operative Treatment of Nasal Stenosis*. "Journ. of Ophthalm., Otol., and Laryngol.," April, 1891.

THE author discusses fully the questions of reflex disturbances, aprosexia, deafness, and injury to the voice caused by nasal stenosis. He uses saw, burr, trephine, chisel, and his own nasal file, according to the needs of the individual case. After the operation the cavity is well cleansed with an antiseptic solution; a pledget of cotton, saturated with a solution of acetotartrate of alumina, is fixed against the wound, and renewed next day. He prefers strong solutions of cocaine, which he thinks improve with age and render the operation almost a bloodless one, before operation.

B. J. Baron.

Kaposi (Wien).—*Pathology and Therapeutics of Rhinoscleroma*. "Internat. Klin. Rundschau," 1891, Nos. 30, 31.

THE author gives a description of the usual symptoms of this disease. The first case observed by him and Hebra was believed to be syphilis, but by the inefficacy of mercury it was proved that there was some other condition present. In all cases it seems to be a tumour placed under the corium like a piece of ivory. The tumour grows, increasing the lips and the nose, and closing the entrances to the nose and mouth. It has a very chronic progress. It never ulcerates. If a piece is cut out there is no bleeding, and the face of the cut resembles ivory. The cutting is accompanied with the sensation of going through hard cheese. The cut surface is covered with serous liquid, and in a short time the defect is hidden by a new mass. Microscopically it resembles a small celled sarcoma. Rokitsansky regards it as a neoplasm. Usually it begins on the nose, but often it spreads on to the lips, the palate, the pharynx, and also on to the larynx. Latterly, the rhinoscleroma bacilli have been found to be the cause of the neoplasm. They resemble Friedlander's pneumonia coccus. As to the treatment, it is possible to destroy the neoplasms by extirpation and cauterization, but a true cure of the disease can never be obtained.

Michael.

Kayser (Breslau).—*Rhinological Communications.* "Deutsche Med. Woch.," 1891, No. 26.

(1) *Fibrous Polypus of the size of an Apple in the Naso-Pharynx.*—The tumour arising from the left middle nasal turbinated was round, and filled nearly the whole naso-pharynx. Operation by galvano-cautery.

(2) *A Tooth in the Nose.*—A girl, fifteen years old, had a fœtid secretion from the left side of the nose. The probe showed that there was necrotic bone. This was removed, and then a tooth could be seen and extracted. As it was not fixed, it cannot be believed that it grew there, but it must have been introduced some time ago, as a foreign body. Cure resulted, but there remained a perforation of the septum.

(3) *Malformation of the Nose and Adhesion of the Nasal Opening following Influenza.*—The patient, a child four years old, had during influenza a severe coryza, which was not treated, and was followed by the malformation.

(4) *Diminution of the Soft Palate and Covered Fissure of the Hard Palate.*—The girl, twenty-seven years old, had nasal speech. The soft palate was retracted, the hard palate was covered with normal mucous membrane, but palpation showed a fissure in the bone. The malformation was congenital.

(5) *Illumination of the Antrum of Highmore* has been applied with good results for diagnostic purposes. Michael.

Loewy.—*Demonstrations on Asthma Bronchiale.* Verein für Innere Medizin, Meeting, April 20, 1891.

IN nasal polypi we find the same crystals which were found by Leyden in the sputum of patients with asthma bronchiale. They consist of phosphoric salts. It is not true that they have any relation to asthma when they are found in polypi, because they are also found in such polypi which have never caused asthma. Leyden believes that the presence of the crystals in asthmatic sputum and in polypi proves a relation between both disorders. Michael.

Bloch (Heidelberg).—*Contribution to the Therapeutics of Empyemata Antri Highmori.* "Münchener Med. Woch.," 1891, No. 35.

THE author applies a trocar modified by Jurasz to perforate the antrum by the nose, and then irrigates the hole by a double-current catheter. For irrigation he uses a solution of creolin. He has applied the method in three cases with good results. Michael.

Bryant.—*Simultaneous Ligation of both External Carotids for Myxo-Sarcoma of the Naso-Pharynx.* "New York Med. Journ.," April 11, 1891.

THE operation was performed on account of the pain and hæmorrhage caused by the growth. After the wounds had healed, the left superior maxilla was removed, only one vessel needing tying during the operation, and the growth removed. Pain and bleeding have quite ceased, and the patient is very comfortable. B. J. Baron.

Grünwald (München).—*Remarks concerning the Treatment of Juvenile Naso-Pharyngeal Sarcoma.* "Monats. für Ohrenheilk.," 1891, No. 6.

CRITICAL remarks concerning the paper of Hausberg. (See the report). Michael.

LARYNX, &c.

Avellis (Frankfurt-a-M.).—*Tuberculous Laryngeal Tumours.* "Deutsche Med. Woch.," 1891, Nos. 32 and 33.

THE author reports extensively upon the literature of the subject, and then relates his own cases, which are so much the more instructive as they show that polypi, resembling in every way fibromata, are sometimes of tuberculous nature.

1. A patient, twenty-five years old, hoarse for some months. On the free edge of the right vocal band a polypus of the size of half a pea, and pedunculated. It resembled a fibroma, but the microscopical examination showed that it was a tuberculous tumour. Ten months later, the first symptoms of lung disease were observed.

2. A lady, forty years old, had a tumour arising from the left Morgagni's ventricle, resembling a prolapse. Examination showed typical tuberculosis.

3. A patient, thirty-two years old, had a polypus of the right vocal band. Operation. Typical tuberculosis. Seven months later, ulcerations on the vocal bands, and disease of the lungs.

4. A patient, nineteen years old. Large tumour on the right vocal band. Here also was an ulceration on the posterior wall. Operation. Exquisite tuberculosis. Some time later, affection of the lungs.

5. A patient, forty-five years old. Red-greyish tumour, of the size of a cherry, in the anterior angle. Operation with Gottstein's forceps. Exquisite tuberculosis. Next year, laryngeal phthisis of usual character.

6. A patient, thirty-nine years old, had a little tumour on the posterior wall. It was believed to be phthisical, but the examination showed that it was only thickened mucous membrane, but some time later appeared an exquisite tuberculous ulcer on the posterior wall, and lung disease. The other five cases are similar to those, but the tumours did not simulate other diseases in so strange a manner as those reported.

The reported cases show that tuberculous tumours are not so rare as is believed, that the lungs of every patient with a tumour should be examined, and especially that an examination of the removed tumours is necessary for an exact diagnosis. *Michael.*

Hertels (Riga).—*Surgical Treatment of Laryngeal Tuberculosis.* "St. Petersburg Med. Woch.," 1891, No. 21.

THE author relates two cases of laryngeal phthisis treated by laryngo-fissure and enucleation of the larynx. Both patients died a short time afterwards. The operation cannot be recommended. One case treated by Heryng's curettement was cured in a short time. *Michael.*

Faulkner (Alleghany).—*Laryngitis in Vocalists.* "New York Med. Journ.," April 11, 1891.

THE author advises us what to do when a vocalist, with numerous pressing engagements, and suffering from sub-acute laryngitis, with

hoarseness, fatigue, pain in the throat, etc., consults us. *Rest he cannot*; then he is advised to take strychnia in large doses; but first the bowels are cleared out, then a one per cent. spray of cocaine, accompanied by aconite and sal volatile internally, and the use of a lozenge, made by Wyeths and composed as follows:—

R. Morphine bimeconat.	gr. $\frac{1}{100}$
Cocaine hydrochlor.....	" $\frac{1}{125}$
Tinct. aconiti.....	m. $\frac{1}{8}$
Rad. althææ	gr. $\frac{1}{2}$

To make one lozenge.

When these measures have had the effect of subduing the more acute symptoms, and on the day when the voice has to be used, the author advises gr. $\frac{1}{80}$ of strychnia after breakfast and lunch, and gr. $\frac{1}{80}$ to gr. $\frac{3}{80}$ after dinner and before the concert. He deprecates the use of wines as a vocal stimulant.

B. J. Baron.

Neuenborn.—*Contribution to the Histology of Laryngeal Polypi.* Inaugural Dissertation, Königsberg, 1890.

THE results of careful microscopic examination of eight laryngeal tumours operated upon by Dr. Michelson. Five of them were fibromata, two myxomata, and one carcinoma.

Michael.

Helwes.—*A Case of Combination of Syphilis and Tuberculosis of the Larynx.* Inaugural Dissertation, Leipzig, 1890.

A PATIENT, forty-four years old, became infected fifteen years ago, and had been hoarse for some months. Gummata of the lips were present. The laryngoscope showed a pale-red tumour of the left lig. ary-epiglotticum. The tumour disappeared under iodide of potash. Some time later arose tuberculosis of the larynx and lungs.

Michael.

Bandler (Prague).—*Relations between Chorditis Vocalis Inferior and Rhinoscleroma.* "Prager Zeitschr. für Heilkunde," Bd. 12, Heft 1, 2.

MOST greyish neoplasms in the under portion of the larynx and trachea, so far as they are not caused by local processes, are of a rhinoscleromous nature, and usually the rhinoscleroma bacilli can be found. In such cases the nose always should be examined.

Michael.

Wolf (Metz).—*Case of Erythema Laryngis.* "Deutsche Med. Woch.," 1891, No. 25.

A PATIENT, forty-three years old, experienced a disagreeable feeling in the throat. The laryngoscope showed the characteristic corresponding tumours on both vocal processes. Treatment with iodide of potassium.

Michael.

Treitel.—*Laryngitis Hæmorrhagica.* "Monats. für Ohrenheilk.," 1891, No. 6. SEE the report of the meeting of the Laryngologische Gesellschaft in Berlin.

Michael.

Pipping (Kiel).—*The Timbre of the Sung Vowels.* "Zeitschrift für Biologie," 1890, Heft 3.

POLEMICAL article.

Michael.

434 *The Journal of Laryngology and Rhinology.*

Denhardt (Eisenach). — *Pathogenesis of Stuttering*. "Deutsche Medicinalzeitung," 1891, No. 49.

THE author concludes: Stuttering is a psychosis, a disease caused by a single pathological idea, and it can be cured by a rational method performed by a special teacher. Local disturbances, such as adenoid vegetations or other nasal diseases, have no relation to the stuttering. The author adds that only a man who has stuttered himself can judge of the disorder and treat it with good results (?). *Michael.*

Meyer (Zürich). — *The supple Action of the Muscles of the Glottis*. "Pflüger Archiv," 1891.

THE thyro-arytenoid and crico-arytenoid muscles are antagonists, and combined produce the position of the glottis for formation of tones. The crico-arytenoidei postici are regulating antagonists for the crico-arytenoidei anteriores, and, combined with the transverse arytenoid muscle, they have a regulating influence on the position and movements of the vocal cords. *Michael.*

Onodi (Buda-Pesth). — *Experimental Researches concerning the Paralyzes of the Larynx*. "Monats. für Ohrenheilk.," 1891, No. 5.

DESCRIPTION of some new experiments performed by the author, proving that the nerves of the postici also die earlier than those of the other muscles, and that the dilators cannot turn inward the arytenoid cartilages. *Michael.*

Rheimer (Prague). — *Contribution to the Casuistics of Functional Neuroses*. "Prager Med. Woch.," 1891, No. 25.

1. A PATIENT, thirty-six years old, sometimes lost his voice without any cause. The laryngoscope showed no change. Temporary improvement by faradization. Diagnosis, aphonia neurosa. 2. An aphonic patient, sixteen years old. The vocal bands close at the beginning of phonation and then the glottis suddenly dilates. Improvement by suggestion. 3. An aphonic patient, thirty-eight years old. The patient also has other nervous symptoms. Improvement by electric treatment. 4. A girl, twenty years old, with clonic spasms of the phrenic nerve and singultus and other hysterical symptoms. *Michael.*

Masing, } *Mediastinal Tumour*. Deutscher Aerzte Verein in St. Petersburg,
De la Croix. } Meeting, Nov. 26, 1890.

A SPECIMEN shown, comprising the trachea and bronchi. The tumour was a sarcoma. By the compression of the trachea and paralysis of the left vocal band a mediastinal tumour could be diagnosed during life, and was suspected to be malignant because of the rapid increase of the symptoms.

DE LA CROIX also showed a specimen of *Mediastinal Tumour* diagnosed *intra vitam* from increasing tracheal stenosis. The tumour was a sarcoma myxomatodes. *Michael.*

Briddon. — *Fracture of the Thyroid Cartilage—Rupture of the Crico-Thyroid Membrane—Tracheotomy—Wiring—Recovery*. "New York Med. Journ.," April 11, 1891.

THE title of the paper explains the scope of the communication.

B. J. Baron.

Chavasse, Thomas F. (Birmingham). — *A Successful Case of Unilateral Laryngectomy.* "Lancet," August 22, 1891.

A CHILD, aged three, suffering from laryngeal dyspnœa, had intubation performed on January 12th, 1889. This was repeated several times, and on January 21st tracheotomy had to be hurriedly done owing to the sudden disappearance of the tube. In the summer of 1889 he was transferred to the surgical wards, wearing a tracheotomy tube, and unable to produce any vocal sound. On examination the larynx appeared to be obstructed by a dense diaphragm, which was impenetrable to any of the appliances passed through the mouth or the tracheotomy wound. Unfortunately, the laryngoscope gave no satisfactory result, owing to the restlessness of the patient. On October 29th thyrotomy was performed, and the larynx was found to be occluded by dense cicatricial tissue. The soft parts having been dissected off (the outer surface?) the right ala of the thyroid cartilage, this ala was separated from the cricoid and removed. The cicatricial tissue in the larynx was then freely taken away with the scalpel and Volkmann's spoon, but the air passage being still occluded below the right half of the cricoid cartilage was excised by prolonging the incision in the median line downwards to the tracheal wound.

For the first two days feeding was performed through a nasal tube, but on the third liquid nourishment was given by the mouth. As at first some of the liquid appeared in the wound, a small piece of sponge was inserted above the tracheotomy tube during feeding. Minced meat was swallowed on the fifth day. The wound healed by the end of six weeks, and in order to maintain the patency of the opening into the mouth a double tube was constructed, one portion of which passed upwards to the epiglottis and the other downwards into the trachea. The patient's power of expression gradually returned and he spoke in a hoarse but audible whisper. A vibrating reed was afterwards adapted.

The stenosis was attributed to the pressure of the intubation tube which was at first retained continuously for nine days, and Mr. Chavasse expresses a preference for tracheotomy as compared with intubation in croup. [This interesting report is valuable as describing a reliable method of treating a very obstinate and serious class of cases. At the same time we should like to place it among the last of *derniers resorts*, and certainly as one that in patients of older growth should never be required. We abstracted recently the reports of several cases of stenosis subsequent to tracheotomy, and in them intubation was found of great value, with or without the operative removal of some cicatricial tissue, without the excision of any portion of the cartilaginous framework of the larynx.]

Dundas Grant.

Lazarus (Berlin). — *Experimental Researches on Bronchial Asthma.* "Deutsche Med. Woch.," 1891, No. 27.

THE author concludes: The attack begins with broncho-spasm and stenosis; then follow the catarrhal symptoms and hyper-extension of the lungs. This complex of symptoms is caused by irritation of the vagus occurring in a neurasthenic basis. If an animal is made apnœic by an apparatus invented by the author, and curarized, and the nasal mucous

membrane is then irritated by the electric current, an increase of the intra-bronchial pressure can be observed. It is thus proved that it is only the irritation of the vagus which is the cause of the asthma. *Michael.*

Steele, Charles (Clifton).—*A Pill Lodged in the Right Bronchus.* "Lancet," Aug. 29, 1891.

A LADY in swallowing a pill felt that it had gone the wrong way, and that all her efforts failed to dislodge it. Before long, pain set in in the front of her chest, three inches below the right clavicle, and afterwards behind at a corresponding spot, deep breathing increasing the suffering. Swallowing was unaffected. Cough came on, and she expectorated fluid which tasted of the pill. The following evening her discomfort was so great that the writer was called in. Auscultation gave no assistance. She was laid on her left side with the hips raised on a cushion, and after some pats on the back, coughed up a little sputum containing some red spots. Though resembling blood, they contained no corpuscles. [Presumably the dissolved material of the "iron" pills.] The hips were raised still higher, and in response to repeated patting, a sudden cough with dark expectoration led to the dislodgement of the pill. *Dundas Grant.*

THYROID GLAND, &c.

Reuter (Ems).—*Case of Wandering Goitre.* "Münchener Med. Woch.," 1891, No. 26.

A PATIENT, seventy-two years old, presented hoarseness. The laryngoscopic examination showed deviation of the larynx and paralysis of the right recurrent. The larynx and trachea are dislocated to the left side. On the right side is such a deep cavity that the lateral part of the larynx is freely prominent. Palpating the cavity reveals a stony hard tumour of the size of an egg, situated under the sterno-cleido-mastoid muscle. During swallowing the tumour moves with the larynx. Percussion shows dulness up to the second rib. In his childhood the patient had a tumour of the neck, but since his fifteenth year in the place of the tumour a hole occurred. Formerly he had not been hoarse; he dates the hoarseness since having had influenza, a year previously. The patient is dyspnoëic, if he bows or exerts himself. Some days later the patient related that the tumour was movable. It could be observed that, if he coughed, a tumour as large as a fist protruded out of the chest into the neck. If it was pressed with the finger it descended into the thorax. It then produced the noise and gave the sensation of a reduced luxation of a joint. The author believes it to be a calcified cystic goitre. As the tumour gives no great pain, and the patient is already seventy-two years of age, an operation should only be performed in an extreme case. Only two similar cases have been observed, by Rose and Wölfler. *Michael.*

Kapper (Doboi in Bosnien).—*Treatment of Soft Goitre by Parenchymatous Injections of Iodoform.* "Deutsche Med. Woch.," 1891, No. 28.

THE author has applied in fourteen cases injections of iodoform oil (about ten injections in every case) with very good effect. *Michael.*

Draper, William H.—*The Treatment of Graves' Disease.* The Practitioners' Society of New York, Meeting, April 3, 1891.

THE speaker believes the disease in its partial or rudimentary forms to be more common than is supposed, and especially in those forms in which the general nervous phenomena apart from the characteristic triad of symptoms are present. He regards the disease as a general neurosis, the anatomical lesion in the cervical sympathetic being very exceptionally found. Such an irritative lesion, while explaining the rapid heart action, would not account for the exophthalmos, nor for the thyroid enlargement. The psychical symptoms, of a melancholic character often alternating with excitement, have in many cases been well-marked. Muscular tremors and paresis, and trophic disturbances, manifested by local congestions and sweatings, point to the nature of the disease as a general neurosis. The treatment must therefore be very variable, and very comprehensive. First and foremost Dr. Draper postulates physical rest in bed, and the avoidance of mental disturbance, suitable dietetic regulation, and passive exercise by means of massage. As regards drugs, he feels considerable dissatisfaction. He thinks cardiac tonics often beneficial, and uses digitalis and its congeners. He gives digitalis so as to get its effect upon the extremely accelerated and irregular action of the heart, giving it frequently in pretty large doses. He prefers it to aconite, and has had no experience of spartein nor of strophanthus. He has seen very beneficial results from the use of iodide of potassium. He has not tried galvanism of the sympathetic, and does not think that the results reported are such as to encourage its use.

In the discussion which followed—

Dr. DELAFIELD thinks the treatment of this disease very much like that of hysteria, and believes that as much depends upon the administrator as upon the drug used.

Dr. FRANCIS P. KINNICUTT advised everything which tended to improve the *morale* of the patient. Change of environment to circumstances of greater quietude was desirable. He preferred digitalis to other drugs. Dr. Delafield had tried iodide of potassium, but thought much more depended on the general management of the patient, the results being much better in private practice than among hospital out-patients. He had the impression that we got the best results from iodide of potassium in cases which had the rapid heart action alone, and those were just the cases which we could not be sure were cases of Graves' disease at all. He was not sure that Graves' disease had an entity as a disease. It might be simply a convenient grouping of certain cases which might not belong to the same class.

Dr. DRAPER considered that some of the reported fatal cases were really cases of organic heart disease presenting some of the symptoms of Graves' disease.

Dr. DANA stated that Charcot considered galvanism the leading therapeutic agent. He had himself a less favourable opinion of it, but he had no doubt it lessened for a time the tachycardia and some other symptoms. He had seen good results from iodide of potassium, but he had seen cases apparently cured by hydriodic acid in which the iodide had failed to give relief. A method of treatment he had employed with success was *forced respiration*. Miss Bryson had observed that in the majority of cases there was markedly diminished respiratory expansion, and he had acted on this indication by including in his treatment systematic respiratory gymnastics. Some New York physicians claimed to have obtained benefit from carbacetate of ammonia.

The PRESIDENT (Dr. GEO. L. PEABODY) had found little benefit follow the use of cardiac tonics. As regards iodide of potassium, he thought the principal benefit was from the potassium rather than the iodine, and the bromide was, for that reason, as good as the iodide.

Læwy.—*Myxœdema*. Berliner Med. Gesellschaft, Meeting, July 1, 1891.

A CASE exhibited.

Michael.

Budzygau (Krakau).—*Two cases of Myxœdema*. "Wiener Klin. Woch.," 1891, No. 31.

(1) A PATIENT, thirty-four years old, had for two years headache, swelling of the lips and tongue, pains in the joints and bones. Now the skin of the face is swollen and pale. The nose is enlarged, the lips enlarged and ectropionated. The tonsils enlarged. No mimetic movement of the face. The thyroid gland is as large as an egg, hard, round, and not painful. Hands and feet enlarged. The memory diminished, the speech slow. Treatment without any effect. (2) A patient, fifty years old, ill for two years, has pains in the hands and feet, and is sometimes dyspnoëic. Now the skin is pale; the face is broad and of stupid expression, but the intelligence is not at all disturbed. Lips and tongue enlarged. The thyroid gland cannot be felt. Hands and feet much enlarged, and there the skin is thickened. Treatment without any effect.

Michael.

REVIEWS.

Schnitzler, Johann (Wien).—*Klinischer Atlas der Laryngologie und Rhinologie*. Mit Mitwirkung von Dr. Hajek und Dr. A. Schnitzler. 2te Lieferung. Wien: Braumüller. 1891. ("Clinical Atlas of Laryngology and Rhinology." With co-operation of Dr. Hajek and Dr. A. Schnitzler. Second Part. With fifteen illustrations, and four chromo-lithographic plates.)

ALREADY, in the report upon the first part of this work, we have mentioned the excellent endowments of this atlas, both as to its text and illustrations. The text of this part deals with laryngeal catarrh and inflammations, their different forms, complications, and treatment; pachydermia, laryngitis

submucosa acuta and chronica ; the different forms of laryngeal œdema and perichondritis. Table 5 presents illustrations of four cases of different forms of perichondritis, and the copies of two specimens of the same disease. Table 6, two cases of idiopathic perichondritis, a third case of syphilitic perichondritis, and the same larynx after a successful antisyphilitic treatment, and a specimen of idiopathic perichondritis. Table 7 illustrates a typical case of pachydermia. The second is a very rare one of true scleroma of the larynx ; and table 8, the specimen of the same case, where the patient died from the disease in spite of tracheotomy. Table 7, figure 3, gives also a specimen of a more chronic case of the same disease. *Michael.*

Treitel (Berlin).—*Hygiene der Sprache*. ("The Hygiene of Speech.") Berlin : Elwin Stande. 1891.

A POPULARLY-WRITTEN book on the disorders of speech, such as stuttering and stammering. The author recommends teachers and parents to regard well the speech of children in early age. It will thus be possible to prevent defects of speech in the beginning. *Michael.*

Schaeffer.—*Ueber die Ursprungsverhältnisse des Nervus Hypoglossus*. ("On the Origin of the Hypoglossal Nerve.") Inaugural Dissertation, Erlangen, 1889.

THE researches performed by Gudden's method gave the following results :—(1) The only origin of the nerve is Stilling's nucleus. (2) The nuclei on the right and left side of the raphé have no relation to the hypoglossal nerve. (3) The fibræ arcuatæ internæ posteriores have no relation to the nerve. (4) Gerlach's commissure and Koch's fibræ propriæ nuclei hypoglossi contain communicating fibres between the nuclei of the hypoglossus, but also other fibres which only pass through the nuclei of the nerve. (5) There is no communication between the hypoglossal nerve and the nucleus of Duval and Roller. *Michael.*

NOTE.

THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

13th Annual Congress, Washington, September 22, 23, 24, 1891.

THE following is the programme of the meeting, a report of which will be presented as soon as received.

President's Address, by W. C. GLASGOW, M.D., St. Louis.

PAPERS.

1. A Case of Foreign Body in the Trachea. W. C. GLASGOW, M.D., St. Louis.
2. A Case of Thyrotomy in a child eighteen months old. CLINTON WAGNER, M.D., New York.
3. Observations on Paralysis of the External Tensors of the Vocal Cords. GEORGE W. MAJOR, M.D., Montreal.

4. The Tonsil in health and disease. HARRISON ALLEN, M.D., Philadelphia.
5. Some of the uses of Pyoktanin in diseases of the Upper Air-Passages. R. P. LINCOLN, M.D., New York.
6. Discussion.—The result of Treatment of the Upper Air-Passages in producing permanent relief in Asthma. Opened by Dr. BOSWORTH.
7. Nasal Papillomata. JONATHAN WRIGHT, M.D., Brooklyn.
8. A Study of a case of Nasal Tuberculosis. E. L. SHURLY, M.D., Detroit.
9. Cyst of the Middle Turbinated Bone. CHAS. H. KNIGHT, M.D., New York.
10. Various Forms of Disease of the Ethmoid Cells. F. H. BOSWORTH, M.D., New York.
11. Discussion.—The Symptoms and Pathological Changes in the Upper Air-Passages in Influenza. Opened by J. SOLIS-COHEN.
12. Useful Deductions derived from the study of a case of Cicatricial Contraction of the Larynx, possessing unusual clinical features, with exhibition of specimen. W. C. JARVIS, M.D., New York.
13. A Case of Epithelioma of the Larynx. MORRIS J. ASCH, M.D., New York.
14. The troublesome symptoms caused by Enlargement of the Epiglottis, and the advisability of reducing the size of this Cartilage by Operative Measures. CLARENCE C. RICE, M.D., New York.
15. The Surgical Treatment of Tubercular Laryngitis. D. BRYSON DELAVAN, M.D., New York.
16. The Laryngo-Tracheal Neoplasms of Tuberculosis. JOHN N. MACKENZIE, M.D., Baltimore.
17. Discussion.—The Relation of Disturbances of the Mucous Membrane of the Upper Air-Passages to Constitutional Conditions. Opened by Dr. ROBINSON.

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THE VOICE AND ITS TREATMENT.

By ARTHUR G. HOBBS, M.D., Professor of Ophthalmology, Otology and Rhino-Laryngology in the Southern Medical College, Atlanta, Ga.,
Ex-President of the American Rhinological Association, etc., etc.

IN order that the caption of this paper may not be misleading, I will say in the beginning that it is not the intention to discuss the beautiful and fascinating subject of voice production by the vocal cords proper, together with the individual mechanism of the laryngeal muscles; neither shall the etiology and pathology of the various forms of voice defects be entered into. But from a very prosaic and common-place point of view, I mean to speak especially of the various pathological conditions of the pharynx, nasopharynx and nares which affect the voice of singers and elocutionists, or indeed of any others who may apply for treatment for the sole or principal purpose of having a voice defect corrected.

Enlarged and Degenerated Tonsils, either in the form of acute, sub-acute, or the consequent chronic hypertrophy or hyperplasia, or it may be only in an apparently slight cryptic degeneration which increases the actual size of the organ, are among the most frequent causes of vocal defects. In any case the singer's voice particularly is affected, either in its resonance, its register, or its resistance. Again, it may be only in the inability of the singer to reach and hold sufficiently long the usual higher notes. Many of the milder forms of tonsillar affections may not be noticed by others, nor even by the singer, until a prolonged attempt at

singing is made, when it will be found that the voice tires—the singer's or the speaker's accustomed resistance is impaired. In such cases the treatment must be made from the voice standpoint; that is, in cases of this character the cause of the defect in the voice should be treated even when treatment would not be otherwise deemed necessary. The means resorted to should not be too vigorous. The treatment of a singer's or a speaker's throat should differ in some respects from what might be proper in others.

When the tonsils are enlarged—and by this it is meant to any extent sufficiently to press upon either the anterior or posterior pillars, or to project beyond their level—they should be amputated.

This should be done, even when it is necessary to raise the organ from its bed, with a tenaculum or vulsellum, in order to clip it with a blunt-pointed bistoury curved on the flat. The greatest care must be exercised in such cases to avoid touching the pillars with the knife, as to cut one would in any case mar the expected good result. When the knife is refused, or for any good reason it cannot be resorted to, the galvano-cautery is, perhaps, the next best; but I always resort to it with a protest in a singer's throat, because it will not leave so smooth a surface as the knife. If, however, the enlargement is slight and principally confined to the crypts, with a consequent cheesy exudation, the galvano-cautery point introduced into two or three glands at each sitting till all are destroyed will accomplish sufficient destruction of the organ. I very rarely use the tonsillotome, unless it be in a very nervous and timid patient, and voice cases, as a rule, are not of this character. This instrument will too often bruise a part of the stump, even in the most experienced hands, and it is desired to leave the stump slightly below the level of the pillars, which is not easy to do with this instrument. The cold wire snare may be used when the base of the hypertrophied tonsil is not too broad, and this means is perhaps the best, but it requires much more time and is much more painful; indeed, it can give a better result only when the operation is prolonged, for the reason that the raw surface that remains will be smaller in extent. The galvano-cautery snare is very convenient, and for special reasons may be the best means of reducing a tonsil, but as it leaves a harder cicatrix, the knife is better in voice cases. The objection to the cold snare is the possible enucleation of the gland. I have never intentionally enucleated a tonsil, and much less would I do so in a singer's throat, because of the cavity left between the pillars. This accidental result has occurred with me in two cases when using the wire *écraseur*, one case in a child, and the other in an elocutionist. No bad results followed, unless the good vocal results in the latter case were not what were expected. When the pillars are unusually prominent, with a broad, tendon-like appearance, it may be necessary to raise the tonsil from its bed, and from between the two prominent pillars, in order to clip off a part of it. In such cases, however, the gland is often honeycombed with a cheesy secretion, when the galvano-cautery point, bent to a right angle, will serve the best purpose, provided the greatest care be used to avoid burning the pillars. Electrolysis for the reduction of hypertrophied tonsils has not accomplished the results in my hands that are claimed for

it by some Continental writers. It seems too slow and tedious, even if the final result could be confidently assured. To correct any abnormal condition of these glands when occurring in a voice throat, is one of the first essentials to a good vocalization. A chronically enlarged tonsil is a foreign body from a functional standpoint, and it would be a good rule to decline to treat the voice when a case exhibits a prejudice to its removal and persists in it. Such persons will rarely fail to return sooner or later for treatment. Out of several thousand tonsil clippings I do not recall a single case in which the voice was not benefited as a consequence. It is true that statistics record some fatal hæmorrhages from tonsil operations, and many more in which the loss of blood has proved not only very troublesome to the operator, but threatening to the patient's life.

It is easy to understand how such a result may follow an operation with the knife if it be made upon one of those very rare cases that we choose to say has a hæmorrhagic diathesis, but this condition of the circulation will probably be very rarely met with in those who seek a consultation for voice defects. Again, a case may sometimes be met with in which an abnormally large artery may be cut; but it would be hard to appreciate the possibility of its ending fatally, when the operator has so many means at his disposal for checking hæmorrhage in this locality. This is said with reference to the amputation of tonsils, and not to their enucleation, since I have had but the two unintentional experiences in the latter operation. This is said in all due respect to the many distinguished operators who practise enucleation in preference to amputation.

Nasal Stenosis.—A partial or total closure of one or both of the nares, either anteriorly or posteriorly, is the most frequent cause of resonance defects in the voice. No voice, whether of a singer or speaker, can ever reach its perfection of resonance, or even its full register, when any obstruction exists in the nasal passages. When the stenosis is only partial, the defect is noticeable in the flattened and dulled intonation. When decided, this muffled speech is described by that misnomer, "talking through the nose." Irregular and disproportioned nares, even though the combined area of the openings be normal, will retard the full development of a singer's voice. It is said of Americans particularly that they "talk through their noses," which can only be characteristic of them in nasal stenosis, if it be at all. An American's voice is naturally characterized by its resonance and softness, which is due to the fact that by education, habit, and association he uses his nasal cavity in phonating perhaps more than others. For this reason it may be that our English cousins do not accuse us altogether unjustly of "talking through our noses," as any stenosis of this organ would naturally affect our vocal resonance most. As our climate subjects us to these obstructions more than does the Englishman's moist atmosphere, the pathological exception may seem to him to be the natural condition.

It will be necessary in this connection to consider especially only those varieties of nasal obstructions that consult us on account of the defects they cause to vocalization.

Deviations of the Septum, either cartilaginous, bony or both, in all their various shapes, including also exostoses, are among the most serious

causes of nasal closures. For the reason that a partial narrowing of the nasal lumen will not, in most cases, interfere with any other function unless perchance it be in some reflex cases, operations for its correction will be called for here much the more frequently.

The first essential in any operation for a misplaced septum, whether for this or any other purpose, is the preservation of as much mucous membrane as possible. When this is the primary object it will make but little difference, except perhaps in the amount of pain to the patient, which one of the many different modes of operating may be selected. The narrow saw is the most generally useful instrument in my hands for correcting these deformities; Bosworth's, or some of its modifications, are the most convenient as well as the most effective. I have slightly modified this saw for my own use by having the teeth to cut both ways instead of only backward, and by making a small probe at the point to lessen the pain of its accidental posterior puncture. Many saws are either too thin, when they become ungovernable, or too thick, for the reason that the teeth lacerate too much tissue. Bosworth's cannot be objected to on either of these grounds. The upward saw should be used in all cases where it is possible to use it, and the moment the teeth pass through the hard tissues—before the mucous membrane is cut through—the instrument should be withdrawn, and the severed parts alone extracted with forceps, leaving the mucous membrane to fall over the wound. Then the antiseptic cotton plug, not too large to produce pressure, but of sufficient size to be retained, is introduced from above to press the unsevered membrane downward over the cut surface. It must be confessed that this is ideal and often not easy of accomplishment; nevertheless it is worthy of a trial, as it is often successful, and if flap union fails, the next best result is reached and nothing, as compared with any other operation, is lost. Especially is this true if all other operations be not based upon the destruction of as little mucous membrane as possible.

The drill, run by an electric motor or dental engine is much resorted to by some operators even in simple deflections; but, for the reason that I am still old-fashioned enough to cling to the preservation of the membrane, I think this instrument should be used only on large exostoses or large septum spurs, and not even in these cases if it be possible to use the upward saw.

The *chisel* and *gouge* are also used by some, but the necessity of their use has never seemed to arise in any case before me. The cocaineization used in all of these operations, indeed in all the operations in the nasal or pharyngeal cavities, should be made as strictly local as possible. A piece of absorbent cotton shaped to fit the case is saturated, not dripping, in a freshly made, strong solution of cocaine and applied to the part and allowed to remain six to ten minutes before the operation is begun. The constitutional effects, by this means, are less troublesome than when the spray is used to apply the cocaine on a larger surface.

Turbinated Hypertrophies.—Just in proportion as the turbinated bodies are enlarged sufficiently to produce a greater or less degree of nasal stenosis, so will the vocal resonance be affected, and the efforts of singing and phonating be so increased that the voice soon loses its naturalness

and easy control. And again, as in stenosis from any other cause, the nasal intonation is observed in the speaker especially, and the singer's voice not only fails in its resistance, but the higher notes cannot be reached. Unfortunately too, those who have chronically enlarged turbinated or decided septum deflections or large exostoses, or indeed decided stenoses from whatever cause, can rarely hope that the usually complicating inflammations will not also be added to the nasal closure; such complicating conditions, for example, as sub-acute, chronic or follicular pharyngitis; sub-acute and chronic laryngitis; Eustachian inflammation, hypertrophied tonsils, adenoid growths, bronchitis, reflex neuroses, etc., etc. Hence it would seem that a nasal stenosis from whatever cause, especially when its possible sequelæ are considered, would be perhaps the most frequent originating cause of defective vocalization. I believe this to be true, not even excepting primary laryngeal inflammations, because in my opinion these latter conditions are comparatively rare occurrences.

The two most frequent means resorted to now for reducing enlarged turbinates are the galvano-cautery and chromic acid. The snare, in any of its forms, should hardly be considered seriously in this connection, although occasionally a pointed, soft, and flabby turbinate may call for its use. My use of chromic acid differs from that of most operators. I use it partly deliquesced or, if it is solid, I make a paste of it in glycerine. A small cotton probe is dipped into it and applied, after cocainizing, to the most prominent point of the turbinate, taking care not to touch the opposite surface, and then with a dry cotton probe the part is carefully mopped till dry. This means should seldom, if ever, be used, if the surface to be reduced presses closely against the opposite tissues, because the resulting slough pressure produces too much pain, not only directly, but in many cases by reflex. On the second or third day, the coagulated slough is easily removed with a cotton probe, after partially cocainizing the parts. Another and still another part is attacked at proper intervals, until all the prominent points are reduced. The contractile tissues are thus stimulated, and the contraction continues till the enlargement is reduced much beyond the size of the slough removed. When the hypertrophy is too dense and the reduction too slow, other means—as the galvano-cautery point—will have to be used. A smooth, moist surface mucous membrane is the final result after this use of chromic acid. I have never tried the “buttoning down” process as used by some, by burrowing into the tissues with chromic acid fused on a platinum point, but consider the galvano-cautery much better for this purpose. Singers will often speak of the improvement in their voice resonance, and of the lessened laryngeal pains first complained of, after the removal of even one slough. An acute pharyngitis will be produced after each and every application when it is used in this manner, unless the greatest care is exercised to prevent the acids from reaching the pharynx, else the voice may from this cause be temporarily impaired, and the subject very much discouraged. This point, I should particularly desire to impress, viz.:—in using chromic acid, as described above, in its soft stage, the danger of its spreading beyond the area desired might to some prove an insuperable

objection to its use; but if cautiously applied and carefully wiped dry, this danger does not exist. No so-called neutralizing spray should be depended on immediately after its application. The surface left after the removal of the slough looks granular and red at first, but in a few days a smooth, moist mucous membrane appears. Furthermore, if the projection still be too great, another and yet another application can be made over the same area, and a smooth surface will ultimately result. Such applications should be made only when the hypertrophy is soft, in truth only when the enlargement is a hyperplasia and not a true hypertrophy.

When the tumefaction has reached the true hypertrophic state, perhaps there is no known means equal to the galvano-cautery for its rapid reduction. The cautery point will, as a rule, give better results than the cantery knife, because there is less mucous membrane destruction. In introducing the point the effort should be made to pierce the most prominent part at an obtuse angle till the bone is reached, then by a slight movement it is slipped along the bone with the object of touching as much at the base of the puncture as possible, and at the same time not enlarge the mucous membrane entrance, always remembering to withdraw the cautery while it is still hot. The final result will be absolutely no visible cicatrix, and the operation is without pain.

The storage batteries in use in my office by myself and assistant are charged from a street wire, and are always ready for use, with all their necessary attachments. Barring the time (eight to ten minutes) necessary for the cocaine cotton plug to produce its effect, no more time is required in its application than in applying a cotton probe.

Reflex Stenoses, such especially as those that cause the erectile tissues to temporarily enlarge, either from irritation, vaso-motor paresis, or increased nutrition, play an important rôle in imparting a nasal intonation to the voice of the speaker especially, and to the singer also, by muffling the higher notes. Cases of this nature, however, have the usual hay fever symptoms, and present themselves for treatment from another motive than voice improvement alone. In treating such cases for either or both purposes, resort may be had to the cautery, or, perhaps, sometimes to the acid, when the application should be made to whatever part indicates the necessity, without reference to the areas, whether anterior, middle, or posterior. The results will, I think, prove equally as good for the accomplishment of either purpose as can be reached by those who look only for these areas.

Polypi seldom assume much size before a singer will have called for an examination, since from their usual post-nasal situation even the speaking voice is quickly affected. The orthodox method of removing them with some wire snare, not with forceps, may be resorted to, remembering not to destroy the mucous membrane, and then to touch the stump with the cautery, or carefully with the acid.

Adenoids will as completely destroy the resonance as polypi, with the disadvantage that they are more liable to be overlooked. The enlarged turbinates that are very probably present with adenoid growths in adults will obscure the view of the latter by nasal inspection. In many cases it

will be found best to first reduce the turbinates, when the softer growth can be reached through the nares with a snare. This, in most cases, will be a more desirable means to the patient, when it is at all practicable, than the opposite route, on account of the retching and gagging produced by the curved forceps when passed under the palate. I will confess that I have sometimes overlooked these post-nasal vegetations at first, only to discover them after reducing the turbinates. Such an oversight may occur when posterior views are difficult and the finger has not been used. These vegetations, polypi, or an enlarged pharyngeal tonsil may be suspected when voice resonance has not been restored after the turbinates have been reduced.

Pharyngitis, in all its varieties, will naturally interfere very greatly with the efforts of vocalization, but almost all inflammations in this region, other than the acute, are either accompanied by, or have their origin in, nasal or naso-pharyngeal inflammations. And yet, a misused voice, either in a speaker or a singer, may strain and irritate the mucous membrane sufficiently to produce a sub-acute or chronic, and especially a follicular pharyngitis, without any complicating connection with the membrane above. All pharyngites that are complicated with nasal or naso-pharyngeal inflammations are more promptly cured when the treatment is first directed above, and then nitrate of silver may be guardedly applied to the whole of the pharyngeal wall reaching up to its vault. The strength of the silver solutions may vary from ten to fifty grains, according to the tolerance in each case; but the greatest care must be exercised in applying it in any strength up to the vault, to prevent its running into the larynx. Phonation should be prohibited for some minutes after its application. When either sub-acute, chronic, or follicular pharyngitis is produced by an ignorant use of the voice—and it is usually the follicular variety—the best and only final good results can be obtained from an elocution teacher. Mild applications of silver once a day to the pharynx for many weeks will, however, assist in the process of resolution while the exciting cause is being removed.

Laryngitis, either sub-acute or chronic, is usually a resultant condition, having its origin in the nares and naso-pharynx, just as the corresponding pharyngeal troubles are secondary; or the incentive, as in the pharynx, may be a misused voice. Certainly it must be admitted that all of the varieties of inflammations, either of the larynx or pharynx, may and do occur primarily; but excluding the acute form, the sequel proves, in my experience at any rate, that they are secondary in most cases. The treatment will naturally then begin above, as in pharyngitis, together with the direct application to the larynx of mild sprays of astringents or resolvents, such, for example, as terebene, eucalyptol, aristol, etc., etc., dissolved in albolene, oil, vaseline, or, indeed, in any non-irritating, oily menstrum, in order that the spray can be inhaled. When misuse of the voice has been the origin of the irritation, a somewhat similar treatment is indicated as in the pharynx, viz., voice training. Such primary causes of hoarseness or other voice defects as tumours or local manifestations in the larynx of tuberculosis or syphilis, cannot properly be considered here, as the patient has applied for the consultation from a more serious motive.

The total restriction of the use of the voice during its treatment is seldom necessary; indeed, the encouragement of its proper and moderate use should be the rule. It would seem quite as unwise to advise a total voice rest because the muscles of its production have been weakened by an old inflammatory condition as to advise a convalescent from typhoid fever not to attempt to walk because of his muscular weakness. Rare exceptions, of course, are made when even the moderate use of the voice muscles increases the irritation. (It will be remembered that the voice treatment of acute inflammations is not now being considered.) Singers should be advised to moderately exercise the voice, but never to attempt their highest or lowest register, and to cease all efforts before a premonition of weariness begins. No attempt is to be made when a conscious effort is necessary, or if a sensation of weariness should begin almost immediately. A similar rule will apply to speakers, who should be advised to read aloud regularly, but to cease at the first intimation of a tired feeling in the throat, or of an uncontrollable voice, and speaking aloud in the open air must especially be prohibited. Those who have been properly taught to conserve the voice give the most prompt and satisfactory results, as it at once asserts itself when a judicious treatment has removed the mechanical hindrances.

When treatment is resorted to in any case solely for the correction of vocal defects, it is necessary that greater care should be exercised, even though the same means may be used as for any other end, than in cases that apply merely for the correction of the pathological lesion. The mildest means that will attain the end, even though a longer time be required, should be the rule, because less risks of violent inflammatory reactions are assumed.

As an aid to all other means of treating the voice and throat, whether it be surgical or otherwise, oil sprays are invaluable. The oily base or excipient of the spray may consist of vaseline jelly, oil vaseline, albolene, or indeed any other of the neutral oily products of petroleum. Any one of these may be chosen for the particular case according to its consistency or soluble properties. Oil terebene in albolene ten to twenty minims to the ounce may be used as an inhalation in all cases to stimulate the laryngeal and bronchial mucous membranes, as their secretions have been more or less perverted by the abnormal gravitations from above. A De Vilbis spray producer with a power from a compressed-air apparatus of ten to fifteen pounds to the square inch is used for inhaling this solution—the hand spray may be substituted, but much less effectively. The spray is made either in the mouth or through the nares during a full inhalation. Any of the other oils can be used as solvents for either spraying or inhaling, according to the necessities of the case, containing in solution whatever is indicated.

The mucous membrane of the nasal and the post-nasal, including all the accessory cavities, particularly that of the Eustachian tube and middle ear, manifests an antipathy to water unless the specific gravity and temperature of the aqueous application be the same as its own secretions; this is not so with the neutral oils. For this reason I never direct a patient to use an aqueous spray of any character in the nasal cavities; this applies to

singers, but not less so to most other cases. I make some exceptions in my own use of nasal sprays, as in spraying cocaine, resorcin, the bichloride, etc., etc., which are sparingly soluble in any of the neutral oils. But even in these exceptions the aqueous solution is placed in a spray bowl containing a warm, oily excipient, and water being the heavier, it is first exhausted, when the oil spray follows.

I am sure that this paper has from its beginning subordinated sprays in voice treatment, particularly when it is possible to reach the nasal defect by any surgical means, and yet I consider their necessity, when intelligently used, only secondary to surgery. It is always soothing, and many times otherwise beneficial to the nasal mucous membrane, to leave it covered with a warm spray of vaseline at the end of a treatment. Proper hygienic instructions should be given these patients to lessen their liability to colds; on the other hand, all "coddling" should be interdicted, especially in the use of wraps, or other extra appliances about the neck. If "coddling" of any part of the body is ever admissible, it would be of the feet, since improperly protected feet will much more probably result in a throat or nasal inflammation than an unprotected neck. Some nervous persons exhibit a great anxiety about catching cold; this mental fear should be made light of, since it no doubt in many instances exerts a potent influence in producing the very result that is most feared.

All attempts at using the voice must be prohibited during an acute recurring stage of any chronic throat inflammation, and mild treatment should always be instituted immediately. Soothing sprays or cotton probe applications should be used appropriately, chosen according to the situation and character of the recurring attack, together with the usual hygienic and constitutional measures resorted to in acute catarrhal inflammations.

CLINICAL LECTURE ON LARYNGEAL PHTHISIS.¹

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SOME few years ago a great deal of attention was directed to the peculiar laryngeal condition which Virchow termed "pachydermia." From time to time cases of this disorder are reported, especially in Germany, but few such cases have been seen or publicly recorded in this country, or by our American colleagues. Descriptions of the condition are not met with in our English text-books of diseases of the throat, but the recognition of the condition appears to me to be of importance, and it is possible that some cases which have been loosely called "chronic laryngitis" may have been of this interesting pathological character. The recognition of the disorder is not easy—indeed I find many intelligent students of this specialty who do not understand what is comprehended under the term "pachydermia."

¹ The first of some lectures given to students of the hospital during 1890 on "The Nature and Treatment of Laryngeal Phthisis," illustrated by cases.

That the disorder is rare I am quite sure, at least in this country, for though I have constantly been on the look-out for these cases in my very large hospital clinic for some four years I have only seen one case which I could bring under this description. Considering the importance attached to localized catarrhs of the posterior laryngeal wall, and to erosions or ulcerations of this region, especially in relation to the incipient stages of laryngeal phthisis, the condition known as "pachydermia diffusa" is of more than passing interest, and in considering the pathology and symptomatology of laryngeal phthisis, and especially the relations of laryngeal phthisis to catarrhs of the larynx, we are bound to spend some little time in the consideration of this condition.

Pachydermia Laryngis.—According to Virchow certain regions of the larynx are covered only with squamous epithelium, viz., the edge of the epiglottis, the inter-arytenoid space, the processus vocales, and the edges of the vocal cords. A certain resemblance exists between these parts and the epidermoid covering of the skin, and a certain series of events occurs in these "dermoid" regions which does not take place upon those regions of the mucous membrane covered with ciliated epithelium. These dermoid regions do not possess glands (this statement is, however, not correct, since according to Heryng's microscopical researches the inter-arytenoid space is particularly rich in glands, which occur also on the edges of the true vocal cords, and are very large in the neighbourhood of the processus vocales). These dermoid regions are relatively dry. Pachydermia has a certain relation to chronic laryngitis, but two kinds of changes are so widely different from this condition that one is compelled to differentiate them. These are *pachydermia diffusa* and *pachydermia verrucosa*. In both there is a quantitative increase of squamous epithelium which always assumes an epidermoid character. This is the chief change in the one case (verrucosa), while in the other condition (diffusa) it is the superficial parts of the mucous membrane which undergo the change, producing thus in the verrucous form small isolated warty patches of change, and in the diffuse form more extensive and diffused enlargements of the mucous membrane. In those regions where the diffuse forms arise the cartilage lies very superficially and the sub-mucous layer is so very thin that the upper layers of the mucous membrane lie almost in contact with the perichondrium. This region is the spot where the processus vocalis originates from the arytenoid cartilage. At this spot is, therefore, sometimes seen an oval swelling (usually symmetrically disposed on both sides) some five to eight millimètres long, and three to four millimètres broad, lying somewhat obliquely, and having in its centre a long groove (where the mucous membrane is bound down to the perichondrium), much resembling in appearance the cicatrix of a healed ulcer. This condition is found in drunkards. The swelling which surrounds this depression is rich in papillæ, which are, however, not to be seen with the naked eye. Such papillary development in swellings at this spot is not normal. This process extends along the whole length of the vocal cords, which become covered with a thickened and epidermoid-degenerated epithelium. With this is occasionally combined a further extension of the process to the

inter-arytenoid space in the form of thick outgrowths and folds with epidermoid covering. Between the papillæ and the very hard and thick epidermis rhagades may occur, and a deceptive appearance of "cancroid" be produced. The process of pachydermia verrucosa consists, as Heryng has pointed out, chiefly of a circumscribed hyperplasia, with no tendency to destruction, while pachydermia diffusa consists not only in epithelial hypertrophy, but a special character of tendency to destruction, and to ulceration. This has been studied by Hünemann, who is of opinion that the ulcerative process may reach the cartilages and even give rise to chondritis and perichondritis independently of other constitutional cause.

Pachydermia diffusa has been carefully studied by Heryng, who proposes for it the term *Laryngitis desquamativa*. In its relation to the question of the so-called "erosive ulcerations" of the larynx, the study of this condition is most important.

Heryng describes two forms of the disorder, the first being a slighter degree of the process not accompanied with ulceration, the second being a more advanced form of the first, chronic, and accompanied by erosions. Though there are numerous glands in the arytenoid region, their alteration and subsequent atrophy leads, as Virchow pointed out, to dryness of the mucous membrane of these regions. According to Heryng the disorder arises particularly in men who over-exert the voice, in those who have chronic pharyngeal catarrhs caused by smoking, alcohol, chronic disorders of the digestive organs, congestion of the abdominal organs, and disorders of nutrition. The exciting cause is, however, found to occur in exposure to cold, and thermic and mechanical influences, such as forced mountain climbing, hunting, and occupations which favour dryness of the larynx, as, for instance, living in small apartments with gas-laden atmosphere. Clouding and swelling of the inter-arytenoid space, with hypertrophy of the papillæ and epidermoid thickening of the epithelium, results. In the early stage a swelling is observed with the laryngoscope in the rimula, covered with a vascular network (or ecchymoses), the vocal cords and ventricular bands being apparently normal. Under favourable treatment cure results in eight to ten days, the cloudiness and swelling diminish, and thin white epithelial tags are desquamated, and the mucous membrane returns to the normal in about two or three weeks. Under unfavourable circumstances, or further irritation, the swollen mucous membrane of the inter-arytenoid space becomes more clouded, loses transparency, is whitish-grey in colour, and is no longer disposed in small folds, but is apparently covered with a thin fur. This extends to the inner surface of the processus vocales, and over the arytenoid cartilages as a more or less thick layer. Often the process is more developed over one side than the other. In more advanced conditions there is also a swelling of the vocal cord on its upper surface, and a swelling over the vocal processes which projects between the cords. After lasting some time the picture drawn by Virchow is observed, viz., the swelling over the vocal process, with the scar-like depression in the centre. If now left to itself the mucous membrane covered with thickened epithelium necroses over the processus vocales. Great catarrh of the whole larynx results, the vocal cords are red and clouded, the ventricular bands swollen and often covered with grey lumps of mucus; the epiglottic

vessels are strongly injected. After some time (one to two weeks) the thin fur of the inter-arytenoid region is thrown off, the thicker membrane over the vocal processes requiring a longer time for its elimination. If the process has been at all severe there remains an erosion, sometimes deep, with grey base and red elevated edges, often requiring from four to eight weeks for cicatrization in spite of treatment, the resulting cicatrix being of a pale red colour. The edges of the healed part are higher than the centre, from epithelial proliferation. Previously to the completion of the process the middle was the highest.

The erosions are usually longish, covered with an epithelial fur, and surrounded with reddened swollen mucous membrane. They may be deep, but rarely extend to the vocal cords as tubercular ulcers do.

The acute form of this condition may develop, according to Heryng, with great rapidity, even within a couple of hours.

Cicatrization and healing of the erosions is slow, and there is a tendency to recurrence.

The *symptoms* of this condition consist of cough, hoarseness or aphonia, burning pains in the neck and a sensation of dryness in the throat. The sputum may be bloodstained, the hæmorrhage proceeding from the surface of the ulcer. None of these cases of ulceration pass into laryngeal phthisis.

As to treatment, in the slighter cases, where there is chiefly swelling of the mucous membrane without ulceration, applications of weak nitrate of silver solutions act well. In the more severe cases, especially where deep erosions exist with hyperæmic edges, leeches may be applied at the commencement of the disorder with good effect with warm fomentations, and attention to hygiene and forbiddance of irritations of the larynx (voice using, tobacco, etc.). Caustics may be applied to destroy the papillæ in the rimula. Weak solutions of copper are effective as local astringents, but only in the later stages of the complaint when no great irritability or tendency to cough exists.

We encounter a very considerable difference of opinion among pathologists of repute whether the onset of the destructive process in the larynx is to be considered as of truly tubercular or catarrhal origin.

Since the discovery of Koch's bacillus there seems to be a method of reconciling these conflicting opinions, and that as Hilton Fagge contends we may accept the doctrine that "tuberculosis is a modification of the inflammatory process," consisting essentially in the formation of granulations (whether leucocytes, or epithelial aggregations according as connective tissue or epithelium is the site of the lesion) to which we may apply the term "tubercle," caused by the presence of a slight irritant, such as Koch's bacillus, and that uniform consolidation or infiltration may result from the presence of bacilli scattered and close to one another.

As to the mode of infection of the larynx we have two widely opposing pathological doctrines. The one originating with Louis, and entertained by many pathologists of repute, is that of infection from outside by the passage and contact of infected sputa with the laryngeal epithelium. The opposite view, which has been very largely accepted, is founded upon the histological researches of Heinze, who endeavoured to prove that the

infection of the larynx proceeds from within outwards, by vascular channels, and not in any case from external infection by phthisical sputum. Heinze's pathological researches, which will again be referred to, are most important, but his conclusions cannot now be entirely accepted. Knowing, as we now do, the infective character of sputum containing Koch's bacilli, we are more in a position to accept the earlier views of Louis. Here, however, we are met with some difficulties. For instance, though we can well imagine how an eroded surface may not only allow a resting-place for secretions or expectoration and penetration of bacilli, how are we to account for tubercular infection when the epithelial surface is unbroken? There is no apparent reason why the bacilli should not find their way between epithelial cells, and in fact Cornil and Babés have demonstrated their presence in the lymphatic spaces between the epithelial cells in the bucco-pharyngeal mucous membrane. Heryng has also demonstrated them within the epithelial cells which line the ducts of the acinous glands, and Cornil and Ranvier clearly proved the development of caseous tubercles within the glandular acini, before the importance of Koch's bacillus was recognized.

Klebs has particularly regarded the ventricles of Morgagni as an important method of infection, by retaining infective matter, favouring the occurrence of tubercular ulcers upon the processus vocales, and in the face of these observations we cannot but believe that infection from outside can, and does, in many cases occur, even when there is an apparently unbroken epithelial surface. The relation of the catarrhs and erosions of the larynx to direct infection will be discussed later on. All tubercular ulcers, whether shallow and superficial, simple erosions, or deep excavations, contain tubercle bacilli. The latter are found also sometimes immediately under the epithelial covering disposed in layers (Heryng). Remembering Koch's contention that the bacilli after entry may become enclosed in wandering cells which later on become transformed into giant cells, the fact that the deposit of tubercle in the larynx takes place, as Heinze demonstrated, in the superficial and not the deeper layers of the laryngeal mucous membrane, we see no difficulty in the theory that the tubercular invasion may be from the outside, at least in many cases—that is, by the medium of infected sputa. In other cases it may probably be by lodgment of infected secretion in the ducts of the glands which are so numerous scattered in the larynx (arytenoids, ventricular bands, epiglottis, and those of the inter-arytenoid region, and the free edges of the true vocal cords, about the processus vocales).

The question of *Primary Laryngeal Phthisis* has excited much attention. Clinically we see a fairly large number of cases in which the disease has attained a definite degree of advancement in the larynx, without the lungs giving any physical signs of involvement, and a good number of observations have been recorded in which, with advanced laryngeal tubercular lesions, the lungs have been found quite apparently intact at the autopsies. We cannot, however, speak of an absolute primary laryngeal affection with any exactness. In all the cases recorded it seems to have been thought sufficient to prove the absence of a pulmonary affection, but before the tubercular nature of the laryngeal

affection can be definitely proved microscopical investigation must determine the true tubercular nature of the lesions, and before the term "primary" can be rightly employed it must be evident that there is no tubercular deposit in any other region of the body.

So far as the lungs are concerned, there is plenty of evidence to support the idea of a "primary laryngeal phthisis" in the commonly used sense of that term, and of such nature were the cases of Orth, Prebinsky, E. Fraenkel, and Demme, and possibly of Marchiava and Aitkins, Morell Lavaillée, Gouguenheim, and others. It must be remembered, however, that though the larynx may be apparently primarily affected, it is not long usually before the lungs show signs of affection, and in those clinical cases where the lungs give no physical evidence of phthisical affection, the lesion may be in the pulmonary cavity all the same, and may, if it remain isolated, even escape detection at the autopsy. The proof of a primary laryngeal phthisis might be of value in a few cases if it were possible to resort to extreme surgical measures, such as may be done in the early stages of cancer, but after all the discussion of the question has little more than an academical interest.

The Relation of Common Laryngeal Catarrh to Laryngeal Phthisis is a much more important question. While most certainly not all catarrhs occurring in tubercular patients are necessarily phthisical, there is no doubt that chronic laryngeal catarrhs predispose to the tubercularization of this organ. We thus meet clinically with cases in which a chronic laryngitis has for long preceded the specific changes in the larynx. This finally induces phthisis by one of two methods, or both combined, viz., the lowering of the resistance of the mucous membrane or the direct infection of erosions or excoriations which accompany the catarrh. Whether the latter or, at least, whether true ulcerations occur in the larynx independently of some diathetic cause, e.g., tubercle, syphilis, typhoid, etc., is a most important question, and one aspect of the question has been treated of in the remarks upon pachydermia. Phthisically disposed individuals are liable to very obstinate laryngeal catarrhs. These may amend and recur during the course of the disease without the larynx ever participating in a destructive process, and it is doubtful how their connection with true tuberculosis is to be regarded. It is worthy of note that in one case of chronic laryngeal catarrh, in which Heinze made a histological examination of the larynx, he found a tubercle with two giant cells situated in the ventricular band. There was no trace of ulceration in the larynx, and Heinze regarded the catarrh as the cause of the tubercular deposit, and not the tubercle as the cause of the catarrh. Doubtless the resistance of the larynx to the inroads of disease of whatever nature is lowered by repeated or chronic catarrhs, and the predisposition of the organ to invasion is heightened by malhygiene, depression of the bodily and mental functions, by hard work, ill feeding, exposure, alcoholism, etc., and especially by a pulmonary affection. In the same way does syphilis in some individuals predispose to phthisis either by the consequent catarrh, or formation of ulcers which subsequently become infected, and we see many cases where the syphilitic larynx has taken on a phthisical aspect, and others where actual phthisis

both of the larynx and lungs has supervened upon late syphilis. The beginnings of phthisis in the larynx are in all cases very variable, and in some very obscure, especially where we have few or no pulmonary signs to assist our diagnosis. Is there any condition of the larynx by which we can foretell the onset of tuberculosis of this organ, and is there anything distinctive in the catarrhs which occur in the phthisical?

Some authors have contended for a *pre-phthisical* stage—that is, a condition of the larynx which exists long before the actual coarse change in the organ distinctive of the disease. Clinical observation teaches us that there are certain signs by which we are justified in predicting the onset of the tubercular process. These are marked anæmia of the mucous membrane of the larynx, in which the pharynx participates, with or without certain pharyngeal and vocal cord neuroses. The anæmia of incipient phthisis is different from that of simple constitutional anæmia; the pallor is almost distinctive, being of a dead whity-yellow colour, and confined to the pharynx and larynx, whereas there may be absence of the usual signs of anæmia elsewhere in the mouth, gums, and lips, etc., and the patient's face may be even florid or ruddy. Sometimes the mucous membrane looks actually sodden and distinctly yellowish, without there being any infiltrated swellings of any portion of the larynx. In such cases we cannot, however, say with certainty that there may not already be actual deposit of tubercle. Along with this marked anæmia we frequently find paræsthesiæ of the pharynx, and sometimes paresis of the vocal cords, chiefly of the internal thyro-arytenoidei muscles. Sometimes the vessels, especially of the epiglottis, stand out in bold relief from the anæmic surface.

In some such patients we often find a general condition of ill-health, and in women of the poorer class a constitutional breakdown, due partly to privation, partly to domestic worry. Sometimes there is already cough, loss of flesh, and night sweating, and weakness of voice or aphonia. At this stage examination of the lungs usually reveals slight apical changes (dulness, deficient expansion, roughness of the breath sounds, or actual crepitation). Often the pulmonary signs are obscure, but we believe that if such changes, however slight, exist at one or both apices, along with marked laryngeal and pharyngeal anæmia, we are justified in diagnosing incipient phthisis.

Such patients are liable to obstinate catarrhal attacks. Under proper treatment these may subside, and the hoarseness and cough accompanying them may disappear. Some patients never, throughout the course of their pulmonary disease, have any more characteristic symptoms of laryngeal implication than these. In others, not so fortunate, the process passes insensibly into that of infiltration and ulceration. Associated with this pharyngeal anæmia, localized congestion of the faucial pillars or of one vocal cord are important. A recent writer (C. Beale) has stated that a unilateral corditis is to be regarded as a phthisical phenomenon. In this we are disposed to agree.

It is commonly the case that, sooner or later, swellings of various regions of the mucous membrane of the larynx make their appearance. These should not be termed "œdemas," as is so often done, since they are

pathologically real infiltrations, and have nothing in common with true œdema. Amongst these infiltrative changes those of the posterior laryngeal wall deserve particular mention. The changes of this region are characteristic. Thickening, with unevenness of the surface of the inter-arytenoid fold, may for long be the only prominent laryngeal change. In such cases there is little to differentiate it from certain forms of chronic laryngeal catarrh, except the pallor of the mucous membranes of the soft palate and rest of the larynx. Simple catarrh generally, however, rapidly improves under astringent applications. It is not so with tubercular infiltration. When, however, ulceration follows, a characteristic condition exists. These ulcers have raised and thickened edges, and are often fringed with pale grey papillary excrescences, which hide the ulcer from view. They are crateriform or superficial, and during life are often very difficult to see, unless the head be well inclined backwards and the mirror be held to one side. The ulcers are generally bathed in dirty yellow secretion. The papillary excrescences are sometimes so extensive that the idea of simple papilloma is given. Innocent growths, however, do not choose the posterior wall of the larynx, and apparent papillomata met with in the inter-arytenoid region must be looked upon as almost invariably tubercular vegetations. This condition of the inter-arytenoid space may exist for years with only slight apical physical signs, or may be cured with appropriate treatment.

The ventricular bands are the seat of infiltration very frequently, and the process generally affects the whole length of the band, varying in extent from slight projections over the surface of the cord to complete hiding of the corresponding cord, the opening of the ventricle being narrowed or entirely lost. The process commences at the posterior end of the ventricular band, and is often continuous with similar swellings of the ary-epiglottic fold and arytenoid region. It may precede all other changes. Often unilateral, it is sometimes bilateral, the swollen bands coming together on attempts at phonation, and causing hoarseness or complete aphonia. Heryng has called attention to a limited infiltrative swelling, which he has seen located in the ventricular bands in the neighbourhood of the processus vocales, composed of hemispherical, shiny, white nodules, the size of a lentil, one of which, being extirpated, was found to consist of granulation tissue, with thickened epithelium, and enclosing a small tubercle with giant cells. This occurred in three patients, who had very slight signs of pulmonary phthisis. The ary-epiglottic folds are very frequently infiltrated, and the tubercular process in the larynx may be first evidenced by this change. Generally the lesion is primarily unilateral, but, sooner or later, becomes bilateral. The swelling takes a club-like or pyriform shape, with the broad end directed to the arytenoids and the tapering end towards the epiglottis. In cases in which the swelling is very marked it is continued into the arytenoid fold, the outline of the cartilages being no longer visible, and, in a forward direction, into similar swelling of the epiglottis. It frequently loses its typical pyriform or club shape, assuming that of a thick, sausage-like swelling.

The epiglottis is very rarely the first seat of infiltration, but is commonly involved during the course of the disease. The whole epiglottis is

thickened, its edges are no longer sharply defined, but smooth, thick, and rounded, curved inwards, and it stands erect and stiff, and is sometimes plainly visible at the back of the mouth, even without depressing the tongue. Infiltration of the glosso-epiglottic folds is very rarely seen.

The true vocal cords rarely submit to tubercular infiltration. It is generally unilateral when it does occur—at any rate, at first. The cord loses its pearly white colour, becomes dull, yellow-looking, or pink. The sharp edge of the cord is lost in a rounded swelling, which extends to its upper surface, and occasionally the cord appears to have an upper and a lower edge, giving the appearance of two cords instead of one. Sometimes the edge appears toothed. In a more advanced condition the whole cord is lost in a swelling which hides its form, and is continuous with infiltrated swellings of the ventricular bands and the arytenoid region. Occasionally the aspect is one less of infiltration than of œdema, the upper surface being apparently lifted up and distended with semi-fluid matter, the whole being of rosy red colour. The subglottic region sometimes participates in the infiltrative swelling, and the lumen of the cavity may be diminished to such a degree that dangerous stenosis supervenes. It may extend to the membranous part of the trachea.

No description of the infiltrations of phthisis would be complete without mention of the polypoid and tubercular growths which sometimes occur in this condition. Such tumours have been described by Andral, Mandl, John Mackenzie, Aritza, Schnitzler, Gouguenheim, Percy Kidd, and others. They occur in two forms; first, a cauliflower-like mass of pale grey vegetations resembling papillomata, usually sessile and broad-based, but sometimes pedunculated; the other form, a more smooth surfaced, rounded, red tumour, harder in consistence than the former, sessile or pedunculated.

Structurally they are found to consist of papillomatous overgrowth and granulation tissue, and to contain giant cells and tubercle bacilli. The harder forms, which are rarer, contain more fibro-cellular tissue.

The following case lately occurred in my practice:—A woman who for many months had presented only the signs of ordinary laryngeal catarrh, developed a few papillomatous vegetations over the right arytenoid cartilage. These were removed with forceps, and after several recurrences finally disappeared. For a short time the laryngeal condition seemed better; then a thickening appeared on the upper surface of the inter-arytenoid commissure, which rapidly increased to a large tumour, slightly mammillated on the surface, having a broad base, and diminishing in breadth in front, where it projected over the vocal cords. It was of the normal red colour of the laryngeal mucous membrane, but of such apparently dense consistence that ordinary laryngeal forceps would not grasp it, and a curette would not detach any portion. Lying well above the vocal cords it did not interfere in the least with their movements or the rotation of the arytenoids; consequently there was no aphonia. It was nearly exterminated by successive galvano-cautery applications. At first no physical signs were detected in the chest, but when the tumour began to spring from the posterior laryngeal wall, slight signs of apical catarrh presented themselves. In this condition the patient left the hospital in apparently

good health. Five weeks afterwards the tumour in the larynx had grown again, and projected so as to cover quite a third of the glottic aperture. The lungs were now found to be advanced in phthisis, a pulmonary cavity was found, and the left vocal cord was ulcerated along its edge. The progress of the case was therefore very rapid. As the growth caused no inconvenience, it was thought better to spare the patient the necessity of submitting to further operation. There is no doubt that it was a tubercular tumour of the larynx. The patient rapidly grew worse and died within six months of the first determination of pulmonary disease. No autopsy was unfortunately obtained.

The situation of these tumours varies. They have been found springing from the vocal cords, ventricular bands, even the ventricular cavity, the base of the epiglottis, and in some cases from the subglottic region.

They are important anatomically in that they are true tubercular formations (granulation tissue, giant cells, tubercle bacilli), and may contain miliary tubercles, and clinically from the facts that they may be the first or only manifestation of tuberculosis of the larynx, and that though not generally causing any symptoms of intensity, they may from their situation give rise to a dangerous degree of dyspnœa.

The softer forms are sometimes spontaneously expelled by coughing efforts. When removed they tend to recur rapidly. They seem never to ulcerate.

The small vegetations which are so often seen in the inter-arytenoid region (especially round the margins of ulcerations) and on the arytenoids are merely papillary excrescences, of pale grey colour and soft consistence, and are like similar vegetations in other regions of the body, epithelial and papillary overgrowth, and are not strictly speaking tubercular. They appear to arise from some irritation of the mucous membrane, such as, for instance, may be caused by the laryngeal secretions. They occur in chronic laryngitis as well as in tubercular disease. When situated on the inter-arytenoid wall they are however, though not themselves tubercular in structure, nearly always indicative of tuberculous.

The ulcerations in laryngeal phthisis vary both as to their appearances, site, and mode of origin. We have previously discussed the question of erosions and ulcerations in simple catarrh, and we have now to confine ourselves to remarks upon the specific ulcerations of laryngeal phthisis. The nature of these ulcerations has given rise to as much discussion almost as the nature of tuberculosis itself. By different authors they have been asserted to be "follicular," "glandular," "aphthous," "catarrhal," "infective," or produced from the breaking down of tubercular deposit. There is more than one mode of origin of these laryngeal ulcers. Thus some are essentially glandular in origin, others arise from the breaking down of tubercular deposits, and others from the infection by the sputa of simple erosions. To these are to be added "necrotic ulcers" as described by Gouguenheim and Tissier.

According to Schottelius and Heryng, simple erosions of the inter-arytenoid space may be produced in the following manner. During contraction of a muscle the blood is forced out into the vessels of the mucosa and sub-mucosa, leading to active blood supply of these parts and

of the glands. If the contraction be prolonged, as in violent coughing, catarrh, etc., excessive blood supply leads to hypertrophy. The inter-arytenoid space, when the muscle is contracted on phonation, presents numerous longitudinal folds and clefts. These folds, swollen out with blood, press between the vocal cords like a polypus, and lead in turn to obstinate coughing. Histologically the excessive stimulation and blood supply leads to thickening especially of these mucous folds, between which lie deep valleys. The edges of the folds are covered with hypertrophied layers of epithelium; the spaces between them are but slightly so covered. As these folds lie together in front the secretion of the glands is imprisoned, and the imprisonment of these secretions, mingled with infective sputum from the lungs, leads to the production of longitudinal ulcers. Not only may they become infected with tubercle bacilli, and thus become tubercular ulcers quite independently of actual deposits of tubercle, but the numerous micrococci and schizomycetes occurring in the sputa derived from pulmonary cavities (Orth) may lead to direct infection of a simple erosion.

The "erosive ulcers" which occur at the processus vocales may become infected in the same manner. The difference between the erosive and the tubercular ulcer of this region is that the latter has a sharper edge, does not possess at the commencement any catarrhal areola, and occurs not on the inner aspect of the processus vocalis (as the erosive ulcer does), but on its upper surface.

Follicular or glandular ulcers occur upon the inter-arytenoid fold, in the glands of the vocal cords, the epiglottis—that is, in the regions where glands occur. The tubercular deposit is sometimes in the acini of the glands, at others outside them. Cornil and Ranvier have proved the deposit of tubercle in the interior of the acini. There is an invasion of small cell formation, in which giant cells are seen, and the affected glandular lobule becomes rapidly caseous, ending in the production of a deep, irregular-edged, sometimes crateriform ulcer.

CLINICAL NOTES.

By DR. ROBERTSON, Surgeon, Throat and Ear Hospital,
Newcastle-on-Tyne.

Phthisis Laryngea Hypertrophica — Perichondritis — Tracheotomy—Recovery.—Thomas Veetch, aged thirty-eight, furnaceman, complaining of great difficulty in breathing and dysphagia. History: Thirteen years ago hæmoptysis; one year ago dyspnœa and dysphagia began. Examination: Omega-shaped epiglottis, contracted ary-epiglottic bands; false cords greatly thickened, especially right, which conceals both vocal cords. This band ulcerated; externally box of larynx protuberant; point of cricoid indistinguishable. Tracheotomy, May 28, 1891. Trachea deeply situated; its upper part, including cricoid, enveloped in a dense layer of adventitious tissue, half an inch thick anteriorly, which binds down and constricts

trachea. Operation under cocaine. An unusually long canula required to reach trachea. Weight before operation, 7 st. 11 lbs. 8 ozs.; a month after, 8 st. 8 lbs., when he resumed work, and has continued at this ever since. There is a cavity in right apex. Cough and expectoration have diminished: appetite fair. External wound dressed with an auramine ointment, which seems to prevent tubercular infection of same. Menthol in ether is inhaled through tube. Remarks: This case proves the benefit of tracheotomy in tubercular laryngitis. The patient was practically doomed had no intervention been made. The unusual complication met with at the operation was no doubt due to extension of tubercular infection into the tissues in front of the larynx. The observance of the rule to keep strictly to the middle line in operating aided in this case greatly, especially as the land-mark of the cricoid was *non est*.

Laryngo-Pharyngeal Stenosis. — William Nelson, aged sixty-one, complaining of dyspnœa, dysphonia, and dysphagia for one year. History: For twenty years has had ulceration of lips, mouth, tongue, and throat. Examination with laryngoscope: Omega-shaped epiglottis. Through chink diameter of pencil one-eighth of an inch of both vocal cords seen, which apparently move freely. With finger on each side of the epiglottis two bands can be felt running from each side of this to opposing surface of oro-pharynx, leaving an aperture for breathing and swallowing, through which tip of finger only can be made to touch arytenoids. The posterior wall of rest of larynx evidently adherent to opposite pharyngeal wall. Tracheotomy, May 14, 1891, under cocaine, to relieve breathing. The dyspnœa fast reducing patient. A further effort was made with blunt-pointed scissors to sever bands referred to. This, however, was followed by dangerous hæmorrhage, and desisted from. An effort is now being made with graduated bougies to enlarge stenosis. Remarks: The above is an unusual form of stenosis; in fact, I have seen no illustration of such a condition. In Schroetter's works none approaching such is given.

A PRELIMINARY DRILL FOR LARYNGOSCOPY.

FURTHER NOTE.

SINCE the appearance of my paper under the above title, my friend Mr. Wyatt Wingrave has made the very apt suggestion that the sound "eh," which I have stated to be unused by English people, is almost exactly produced in the words "air" and "hair" as uttered by them. I have acted on his suggestion, and recommend the adoption of the word "hair" as a means of leading the patient to the emission of the vowel-sound "eh," which I consider of great value in facilitating laryngoscopy.

Dundas Grant.

NEW INSTRUMENTS AND THERAPEUTICS.

White, W. Hale (London).—*A Spatula which Prevents the Patient from Expectoring on to the Observer.* "Brit. Med. Journ.," Aug. 29, 1891.

A TURCK'S spatula, with a large disc of plain glass fixed on it, is the arrangement described. It is made by Messrs. Down Brothers, St. Thomas's Street, S.E.
Hunter Mackenzie.

Batten, Rayner D. (London).—*Concave Laryngeal Mirrors.* "Brit. Med. Journ.," Aug. 29, 1891.

THE author states the advantages of these to be :—(1) Magnified size of the image ; (2) better focussing of light on structures below the vocal cords. He can find no previous mention of their use in laryngoscopy, and he believes it would be generally advantageous if laryngeal mirrors were generally made slightly concave. [The author has overlooked the reference to concave mirrors by Morell Mackenzie—"Diseases of the Throat and Nose," vol. i., p. 224.]
Hunter Mackenzie.

Phillips, Wendell C.—*An Economical Cotton Reservoir.* "Med. Record," July 18, 1891.

A METAL cylinder, having its upper orifice crossed by several wires, is fitted by bayonet-joint fastenings on to the base, which forms the bottom of the reservoir. On this base is a spiral spring, pushing upwards a round plate of metal. The cotton wool for use is placed on this plate and pressed against the cross-wires by means of the spiral spring. It can obviously be conveniently picked out for use from between the cross-wires. A cover can be made to keep out dust and dirt. [The cross-wires seem a simple variation, if not improvement, upon the round opening of the otherwise identical article used by our dentists.]
Dundas Grant.

Hodges, R. C. (Texas).—*A New Forceps for Adenoid Growths.* "Med. Record," Aug. 8, 1891.

THE stems just beyond the joint (which is further from the points than in our instruments) are bowed, so as not to pinch the uvula. The cutting surfaces are large, and the blades are fenestrated. They are made by Meyrowitz of New York.
Dundas Grant.

Walsham, W. J.—*Forceps for Correcting Deformities of the Nose.*

FOR old fractures of the nasal bones, with displacement, or for lateral deviations of the nose, the result of former injury or congenital defect, Mr. Walsham has had made by Messrs. Arnold some strong forceps with blades moulded to the shape of the nasal bones. (Fig. 1.) The larger blade is concave inwards, to correspond with the convexity of the outer surface of the nasal bone ; the smaller blade is convex inwards, to fit in

like manner the concave inner surface. Both blades are smooth, and, when the forceps is closed, do not touch, so as to prevent as much as possible the crushing of the soft tissues. The handles are long, to give a more powerful leverage, since very considerable force has to be employed to move the displaced bone in long-standing cases. In Fig. 2 the forceps is shown *in situ*. The instruments are made in pairs, a right and a left, and in three sizes, to suit different-sized noses and patients of various ages.

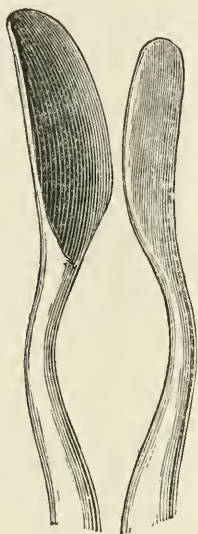


FIG. 1.

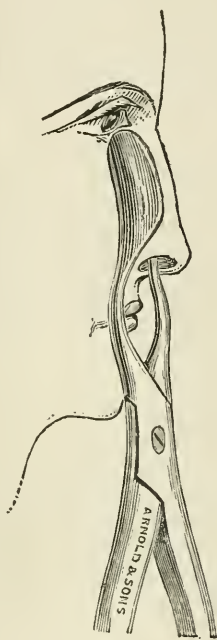


FIG. 2.

For a deviation of the nose to the left the right-side forceps is first applied, and the right bone slightly corrected; then the forceps for the left side is used to move the left bone. By alternately applying the right and left forceps the bones can generally be brought into place, or at all events be improved as to their position. Mr. Walsham has only once seen the skin give way under the pressure, and in that case it healed by first intention under a drop of collodion. In some cases it is found of advantage to bend or break the nasal process of the superior maxillary bone, which can easily be done with the forceps.

After reposition the bones should be kept in position for a week by means of a nasal truss.

Dundas Grant.

Cory, F. W.—*A Sanitary Sputarium.* "Lancet," August 29, 1891.

DESCRIBES a very sensible spit-pot. It has two handles, and can therefore be handed in a convenient and cleanly manner from nurse to patient, and *vice versa*. It has a lid, and therefore an important æsthetic and sanitary

requirement is fulfilled. Its lid is attached without any fixed hinge, and can therefore be easily cleaned. The lid also opens from either side, so that the pot can be used by either handle. It is charged by having a little antiseptic saw-dust placed inside it. It is made of tin, and is therefore not liable to breakage. The sputarium is supplied by W. Jones, chemist, Bournemouth.
Dundas Grant.

Goodwillie.—*Electricity in Surgery, with special reference to its Uses in the Nose, Mouth, and Throat.* "New York Med. Journ.," June 6, 1891.

THIS is a good practical paper on this subject, well illustrated by drawings of apparatus, and is worthy of being read *in extenso*. *B. J. Baron.*

Allyn.—*Treatment of Common Colds in Children.* "Med. News," Aug. 29, 1891.

THE usual hot bath and go-to-bed treatment with aconite or veratrum viride is recommended in the beginning of the cold. Bronchitis kettle and inhalation of menthol by placing half a teaspoonful of the crystals into water, and heating gently until steam comes off, preferably when the child is asleep, lest it irritate the eyes, are recommended. Cleansing alkaline douches for the nose, and painting the nostrils with a five to ten per cent. solution of menthol at night are recommended for sub-acute rhinitis.

Tonics in the late stage and to destroy the predisposition to "taking cold" are valuable.

The author recommends chloride of ammonium for sub-acute bronchitis.
B. J. Baron.

Bumstead (Decatur).—*The Therapeutic Value of Vinegar.* "The North American Practitioner," May, 1891.

THE author has treated with great success cases of croup and diphtheria by vapourizing vinegar into the sick room by pouring it on a heated flat iron or brick.
B. J. Baron.

Wainwright, Lennox (Folkestone).—*Menthol in Hay Fever.* "Brit. Med. Journ.," July 18, 1891.

THE author recommends that it be mixed with carbonate of ammonia, and used in an ordinary smelling-bottle. (Mr. Lennox Browne also recommends this remedy.—"Brit. Med. Journ.," Aug. 1, 1891.) *Hunter Mackenzie.*

Cartaz.—*Eczematous Erythema following Applications of Salol.* Soc. Parisienne de Laryngologie, June, 1891.

THREE cases are recorded which show that salol applied to the mucous membrane of the nose may give rise to attacks of this nature on the skin of the nose, lips, and cheeks. If it is remembered that salol is a compound of phenol and salicylic acid, and that in contact with fatty bodies it is split up pretty easily, the presence of an exanthem is easily explained. Cartaz believes that in subjects predisposed to eruptions it is preferable to employ a similar therapeutic agent.
Joal.

Saint-Hilaire.—*Demonstration of the Local Anæsthetic Properties of Antipyrin, and its use in certain Affections of the Throat and Larynx.* Soc. Parisienne de Laryngologie, June, 1891.

IN a preceding work the author has shown that antipyrin employed locally in affections of the throat and larynx caused the symptoms due to exaggerated sensitiveness to disappear, also cough, tickling sensations and pain. The anæsthesia produced by antipyrin is complete. It should be given generally every one to two hours, and in solution of thirty per cent. Where it is desired to obtain rapid anæsthesia of slight duration, cocaine is preferable.

Joal.

KOCH'S TREATMENT.

Ehrlich, P. (Berlin).—*The Treatment of Tuberculosis (with special reference to Pulmonary Consumption) by Koch's Method.* "Lancet," October 24, 1891.
Abstracted and translated by T. W. Hime.

PROF. EHRLICH considers that pathological reports do not invalidate the soundness of Koch's arguments in support of the principle on which his method of treatment is founded. The essential point is the local effect on all tuberculous tissues. Where there are bacilli, there is also a certain amount of "toxin," and the reaction is the result of the joint effect of the present and the added toxin. The toxin *in loco* attacks the tubercle from the centre, the added from the periphery, and in the latter with more effect, as in all probability the central cells have acquired immunity from their habitual contact with the toxin produced by the bacilli, whereas the peripheral cells are still susceptible. After injection the metamorphic products may be thus liberated, and the conjointly induced reaction be very great and out of proportion to the smallness of the dose, as has been observed clinically.

Ehrlich considers tuberculin of great value for diagnosis (we presume only in case of a *positive* result), and thinks that only actino-mycosis and leprosy can lead to confusion—a confusion only in a theoretical sense, as the diseases are clinically quite distinct. He admits that many, apparently healthy, have shown reaction after even minute doses (one milligramme), but he explains away this objection on the ground that a very small mass of tubercle may be sufficient to answer to the injection, and that *post-mortem* records show that one-third (some say one-half) of all bodies examined are found to have suffered from tubercle. Moreover, in experiments with tuberculin on apparently healthy cattle it was proved *post-mortem* that all those which showed reaction were tuberculous.

The procedure he recommends is as follows:—The dose should be large enough to produce, without fail, a reaction of the diseased parts. In pulmonary tubercle the guide must be the temperature, and it should not be allowed to reach febrile standard (100°4) or upwards. In the majority of cases the dose should be under one milligramme; in vigorous patients not advanced in the disease, half a milligramme; in debilitated or advanced cases, not more than one-tenth milligramme to begin with; the injection may be repeated every two or three days; the dose should not

be increased till the slight reactive wave has passed off. In this way he professes to have brought about decided improvement in a comparatively short time. In all cases suitable drug treatment could be combined with the tuberculin injections; thus, in cases of lupus, the simultaneous application of mercurial plaster. Surgical treatment, when appropriate, should also not be omitted. This is the "new" method, and pathological attacks on the results obtained under the use of the "old" he rules out of court. The use of a pure tuberculin—which Koch is striving to produce—by this method he considers full of justifiable hope. *Dundas Grant.*

Koch, Prof. R.—*A Further Communication on Tuberculin.* Abstracted and translated by T. W. Hime. "Lancet," Oct. 31, 1891.

IN experimenting with various reagents, Koch uses the biological of injection into tuberculous guinea-pigs to prove the presence of the active principle. If fine volumes of alcohol be added to tuberculin, a brown, resinous, sticky mass is precipitated, and both it and the supernatant fluid give the biological reaction. When a much larger quantity of alcohol is added the precipitates become granular, and can be dried over sulphuric acid and powdered. This (white) powder is not the pure principle. Further, if the alcohol in the filtrate be evaporated off, a yellow fluid remains, which is only fatal in doses thrice as large as the fatal dose of tuberculin—therefore contains a large proportion of the inactive ingredients. Endeavours to separate extraneous ingredients from the alcoholic precipitate did not succeed.

The addition of two of alcohol to three of tuberculin—*i.e.*, sixty per cent.—gave rise to a white flocculent powder which could be separated and washed, and which for the present he regards as "pure tuberculin." Solutions of this in fifty per cent. of glycerine are durable. The pure tuberculin has chemical properties showing it to belong to the albuminate bodies, nearly allied to the albumoses, from which it differs by its resistance to high temperatures. From peptones it differs inasmuch as that it is precipitable by ferric acetate.

In addition to experiments on guinea-pigs, there were made injections on several medical men (Dr. Kitasato and others), with the following results:—

2 mgr. gave a maximum temperature of.....	100°94'
3 " " " 	101°66'
4 " " " 	102° 2°
5 " " " 	102° 5°

In calculating the dose for the human being the pure tuberculin must be counted as forty times as strong as the raw tuberculin. In other respects the effects on patients were neither better nor worse, and *no decided progress has been made in the therapeutic aspect of the question.*

Dundas Grant.

DIPHTHERIA AND CROUP.

Martin.—*Report of Two Cases of Croup.* "Buffalo Med. and Surg. Journ.," June, 1891.

NOTHING new. The discussion that followed the reading of this report turned mainly on the method of performing intubation. *B. J. Baron.*

Behrens (Chicago).—*Topical Treatment of Diphtheria and Croup.* "Med. News," May 9, 1891.

AFTER expressing his opinion that diphtheria and croup are one and the same, and are primarily a local disease, and that the constitutional symptoms are secondary, the writer recommends cauterizing the patches on the tonsils or fauces with solid nitrate of silver; if the larynx is affected, he uses a twenty per cent. solution of the same drug for rubbing into it. After the use of the caustic stick a solution of common salt is applied to neutralize any superfluous nitrate of silver. The use of a spray is recommended as an adjuvant, and then only in expert hands. Intubation is alleged to be merely a "bloodless relief from suffocation," and to inflict far more suffering upon humanity than tracheotomy. *B. J. Baron.*

Pace (Elwood).—*A Synopsis of the Symptoms, Course, and Treatment of Forty-five Cases of Diphtheria.* "The Times and Register," June 6, 1891.

THE author believes that mercury is of no use, and that stimulants ought to be withheld until there is absolute need for them. Nitrate of silver is said to be the best local application, and the steam atomizer to diffuse boracic acid and "liquid hydrastis," and tincture of myrrh diluted with alcohol is of value in relieving dyspnoea. Internally, tincture of phytolacca decandra, in two to five drop doses, appeared to be useful.

B. J. Baron.

Couldrey, James (Scunthorpe).—*Salicylate of Soda in Diphtheria.* "Brit. Med. Journ.," July 18, 1891.

THE administration of the drug ought to be continued more or less during the first week. [Mr. Lennox Browne confirms the author's statements as to the value of this drug in the milder forms of diphtheria.—"Brit. Med. Journ.," Aug. 1, 1891.] *Hunter Mackenzie.*

De Ruelle.—*Treatment of Diphtheritic Angina by Cyanide of Mercury.* Congrès de Marseille, Aug., 1891.

THE author has obtained good results by the employment of cyanide of mercury internally (as recommended by Werner, Selden, and Loeffler) in the following manner:—

Cyanide of mercury0.05 centigrammes.

Alcohol at 80° 8 grammes.

Distilled water 192 „

A teaspoonful every hour,

In seven cases of children of from two to four years of age he has had seven cures. Improvement, sensible from the first, is freely established on the third day. The treatment should be instituted from the first day of the disease, and in the one case in which the author met with failure the patient was already in the stage of generalization before the treatment was applied. *Joal.*

Seaton, Edward (London).—*Discussion on Diphtheria.* Seventh International Congress of Hygiene and Demography. Section I. : Preventive Medicine. Aug. 12, 1891.

DR. SEATON, who opened the discussion, commented on the increased mortality in England since the adoption of extensive works of water supply and sewerage, and reiterated his opinion that the disease was uninfluenced by general sanitary conditions. The tendency of the discussion was to the effect that local disinfecting measures were effectual, or at least of great use in preventing the spread of diphtheria.

Dr. THURSFIELD believed that the ordinary accepted ideas as to the etiology of the disease were misleading. He thought that the failure of sanitary improvements to stop the spread of the disease were due to its dissemination by mild cases acting through school agency. Personal susceptibility was the chief influence favouring the spread of the disease.

Dr. TRIPE, as the result of thirty-five years' experience, had noticed that good drainage had but little effect in diminishing the virulence and extent of epidemics of diphtheria.

The Section passed a resolution "that it was extremely expedient " that the European Governments should make a comprehensive and " systematic inquiry into the causes of diphtheria." *Hunter Mackenzie.*

Sevestre.—*On a Variety of Diphtheroid Stomatitis, with Staphylococci (Impetiginous Stomatitis).* Soc. Méd. des Hôpitaux, June 26, 1891.

THE author has latterly observed some examples of a special variety of stomatitis, which is characterized as follows :—It first affects, and often in an exclusive manner, the internal surface of the lips, sometimes also certain points of the buccal mucous membrane. It gives rise to white plaques of diphtheritic appearance, which are confused with the mucosa. It is generally cured in six or eight days, and presents no indication of gravity.

This stomatitis is especially observed in debilitated children, whose general nutrition is more or less defective. It is particularly frequent in occurrence at the end or during the course of measles and whooping cough, but may be observed independently of these complaints.

It coincides frequently with chronic coryza, and especially with impetigo of the face.

This affection might be confounded with ulcero-membranous stomatitis, and especially with a manifestation of diphtheria.

Ulcero-membranous stomatitis is distinguished by its special localization (on the free edge of the gums, and the inter-maxillary region of the cheek) and by the characteristic fœtidity of the breath. The diagnosis from diphtheria is more difficult, but there is a certain number of

characters which lead to its distinction. Impetiginous stomatitis remains always localized on the buccal mucosa, without extending beyond the free edge of the palatine arch; this is scarcely ever the case with diphtheria. The eruption of the plaques occurs simultaneously, and the progressive invasion is not seen which characterizes diphtheria. Lastly, these plaques are intimately adherent to, and cannot be separated from, the mucous membrane without tearing it. A more peremptory reason for distinguishing diphtheroid stomatitis from diphtheria is found in the bacteriological examination. In all cases seen yet, Gaston and the author have found almost exclusively present the staphylococcus pyogenes aureus. This appears to demonstrate conclusively the nature of this variety of stomatitis. We may go further, and ally this variety of stomatitis to impetigo. Cultures made with the products of impetigo have demonstrated the presence of the same micro-organism (the staphylococcus aureus).
Joal.

NOSE, NASO-PHARYNX, &c.

Lederman, M. D. (New York).—*Acute Coryza*. "Med. Record," Aug. 1, 1891, p. 138.

THE nasal chambers are sprayed with any of the antiseptic solutions—Seiler's preferred—until they are sufficiently cleansed, and then the following solution is used:—℞. Cocaine, menthol, āā. gr. xx., benzoinol, ʒij., m. fl. solutio. The menthol is said to keep up the local depletion induced by the cocaine. Benzoinol is bland, unirritating, and free from unpleasant odour.
Dundas Grant.

Gradenigo.—*Contribution to the Pathological Anatomy of the Nasal Cavities*. "Annales des Mal. des Oreilles, du Larynx, etc." Aug. 1891.

THE author has examined the nasal fossæ of 103 subjects and enumerates the different lesions found at the autopsy. Thirty individuals had normal nasal passages. Gradenigo enumerates the anomalies found in the other subjects. The interesting point of the work is that in nineteen cases empyema of the maxillary sinus was found. In face of this considerable proportion, Gradenigo thinks that a large number of empyemas give no appreciable signs and escape observation.
Joal.

Natier.—*Mucous Polypti of the Nasal Fossæ in Children under the age of Fifteen*. "Annales de la Polyclinique," July, 1891.

THE author points out the rarity of this affection in children, and relates a case, which with that recorded by Cardone made the only ones published up to the present.
Joal.

Gellé.—*Perforation of the Nasal Septum in Typhoid Fever*. Soc. Parisienne de Laryngologie, June, 1891.

THE author has been enabled to follow the course of the ulcerative processes which succeeded to epistaxis. The perforation was preceded

by a general external enfeeblement and thinning of the septum, so that it became a lamella as fragile as glass, and the tissue was unable to resist the picking by the finger nail of the patient. *Joal.*

Philip, A. A. (Belfast). — *An Easy and Effectual Method of Plugging for Epistaxis.* "Brit. Med. Journ.," July 18, 1891.

"A PIECE of old cotton or silk about six inches square is taken, and by means of a probe, &c., is pushed, 'umbrella' fashion, into the nostril until it is felt that the point of the 'umbrella' is well into the cavity of the naso-pharynx. The probe is now pushed on in an upward direction, and then towards the sides, so as to push more of the 'umbrella' into the pharynx, and is then withdrawn. A considerable quantity of cotton wool is pushed well back to the bottom of the sac in the pharynx. Then, the probe being held well against the packed wool, the mouth of the sac is pulled upon, and thus its bottom is drawn forward, and forms a firm, hard plug wedged into the posterior nares." This method is highly recommended by the author. *Hunter Mackenzie.*

Todd (St. Louis). — *Curved Nasal Septum; a Successful Method of Operation.* "Med. News," June 20, 1891.

AFTER reviewing the various methods of treating this deformity, the author describes his own. This consists in making a stellate incision with a Steele's forceps, and then cutting across the base of the most refractory segments with a knife a few days afterwards. The mutilated septum can then be pushed into place, and retained there while healing is progressing by means of suitable plugs. This operation is said to be quite successful. *B. J. Baron.*

Roe, John O. (Rochester, N.Y.). — *The Correction of Angular Deformities of the Nose by a Subcutaneous Operation.* "Med. Record," July 18, 1891.

IN cases of exaggeration of the Roman nose amounting to deformity (especially when the skin is so stretched over the projection as to be painful), Dr. Roe employs a method of treatment by which the prominence may be removed without external scar. He cocaineizes the part thoroughly by applying the drug inside the nostril, and injecting it subcutaneously outside. He then (from within) makes "a lineal incision completely through the upper wall of the left nostril, just in front of the nasal bone, between it and the upper lateral cartilage of the nostril, to the under surface of the skin." This incision he widens "laterally from the insertion of the upper border of the triangular cartilage half way down the side of the nose," until he has "a sufficiently large opening to permit the introduction of instruments freely." He then raises the skin from the bridge of the nose over the region where the operation is to be performed, introduces a pair of angular bone-scissors, and cuts off the projecting piece of bone. Antiseptic precautions are adopted, and after the completion of the operation iodoform is blown in through the opening. The skin is then allowed to drop into its place, where it is retained by means of sticking-plaster. *Dundas Grant.*

Jacquel. — *Bacteria of Rhinoscleroma.* Soc. de Dermatologie. July 9, 1891.

IN a fragment of tumour the author has removed, and from which he has

made cultures, he has been able to isolate two distinct microbes. 1. An organism in little chains, the characters of which are identical with those of the streptococcus pyogenes. 2. The bacterium which Frisch discovered, and which has been studied by Pellizzari, Cornil, Alvarez, Paltauf, Eiselberg, etc. This is a short bacillus, easily cultivated at the room temperature, not liquefying gelatine, and producing by inoculation a characteristic *clou*. This microbe is not endowed with movement, it is easily coloured by the various aniline colours, and decolorized by Gram's method. In the tissues it is found to be surrounded with a capsule, which it loses in culture, but it can be obtained encapsuled as far as the first generation. These are, as has been long observed, the characteristics of Friedlander's microbe. However, the experiments of Paltauf and Eiselberg seem to assign to Frisch's bacterium a virulence less than that of Friedlander. Inoculations on the guinea-pig and mouse confirm this, so that it is not at present possible to determine *absolutely* the characters of these two microbes. As to its rôle in the pathogeny of rhinoscleroma it is not established certainly. No one has yet succeeded in obtaining experimentally a neoplasm like that constituting the disease, and it is necessary to remember that Netter and Thost have demonstrated the existence in the normal state, in the saliva and nasal mucus, of Friedlander's organism, very probably identical with that of Frisch. It is then possible, as Netter says, that there is a secondary penetration of the tumour by the bacilli. As to the streptococcus found associated with the bacterium of Frisch, the author remarks that it is quite possible that its penetration dates from the operative trials which the patient has submitted to previously.

Joal.

Kelliher (Pawtucket).—*A Five-inch Hair-Pin in the Right Posterior Naris.*
"Boston Med. and Surg. Journ.," June 11, 1891.

It was removed by forceps.

B. J. Baron.

Deschamps.—*Note on some special points relative to the Treatment and Diagnosis of Adenoid Tumours.* "Dauphiné Médical," June, 1891.

THE author insists upon the peculiarity so often met with, viz., the presence of adenoid vegetations which lead to auditory affections in individuals in whom examination of the fauces would not at first lead to a suspicion of the condition. He then calls attention to the frequent existence of vegetations in subjects who have much passed the age of adolescence.

Joal.

Mounier.—*The Examination of the Naso-Pharynx.* "Annales des Mal. des Oreilles, du Larynx, etc.," Sept., 1891.

AN instrument is described by the author which has just been constructed for him by Galante, and which combines a tongue depressor while at the same time raising the uvula.

Joal.

Schleicher.—*Transparent Illumination in Ten Cases of Empyema of the Maxillary Sinus.* "Annales de la Société de Médecine d'Anvers," June, 1891.

IN ten cases the author has practised Voltolini's method of examination. In six cases the examination has been a perfect success. In two cases

there was no result. In two other cases the examination has furnished paradoxical results. *Hicquet.*

Jeanty.—*Latent Empyema of the Antrum of Highmore.* Thèse. Bordeaux. 1891.

THIS form has a slow evolution, is insidious and very frequent. The author has collected twenty-two cases. There exist neither pain, nor swelling in the affected cheek, and the sole manifestation of the disease is nasal hyper-secretion of continual or intermittent character, fætid or without odour.

According to the author, in each case of nasal blennorrhœa it is necessary to make penetration by means of a small trocar, at the level of the inferior meatus, an operation which is without inconvenience. For the treatment of abscess he recommends Cooper's method (opening through the alveolus). *Joal.*

Frontaux, Le S.—*Note on the Surgical Area of the Frontal Sinuses.* Congrès de Marseille, Aug., 1891.

THE frontal sinuses studied in twenty-three subjects from twenty-one to eighty-one years of age (thirteen men and ten women), and figured schematically, show that the classically described predominance of the male over the female sinuses is verified. The increase in the adult due to age is uncertain and irregular. Total absence has been recognized twice, and unilateral absence three times. The left sinus is often prolonged a little more than the right, and this latter oftener has a lachrymal prolongation. A number of measurements are given. *Joal.*

PHARYNX, ŒSOPHAGUS, &c.

Laverau.—*Urticaria of the Throat.* Soc. Méd. des Hôpitaux, June 26, 1891.

A PATIENT, thirty years of age, was presented who almost every morning had attacks of urticaria, sometimes on the hands, at others on the feet, at times on the shoulders, and more rarely on the face. On the morning of his presentation before the Society his urticaria was manifested in the throat, and there was an œdematous tumefaction, well marked, of the uvula, the faucial pillars, and the tonsils. There also existed dysphagia and dyspnœa. There was an urticarial plaque on the tongue.

Drs. MOULARD-MARTIN, RENDU, and SEVESTRE stated that they had seen similar cases. *Joal.*

Lubet-Barbon.—*On raising the Arch of the Palate, and its Application.* "Archives de Laryngol.," July, 1891.

THE author vaunts the advantages of Moritz-Schmidt's instrument, and recommends for anæsthetization of the palate insufflations of a powder of cocaine (cocaine 1 gramme, sugar 0.20), with a sharply curved insufflator, so that the powder may cover the upper part of the palate. *Joal.*

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Schnell. — *Paralysis of the Arch of the Palate in Locomotor Ataxy.* Congrès de Marseille, Aug., 1891.

A CASE is recorded of a man of forty, with syphilitic history, who entered the hospital in 1889, with all the signs of Ducheue's disease at the stage of ataxy. The commencement of the disease dated from 1870. The pharynx was found to be insensitive to touch; the uvula was pendant and anæsthetic; speech and deglutition were normal. This paralysis of the arch of the palate would appear to be a symptom of that stage, and to be presented under two forms, according as the uvula is pendant, and the orifice not malformed (complete paralysis of the azygos muscle), or as the uvula is projected to the right or the left (unilateral paralysis). *Joal.*

Bourges. — *Anginas and Scarlatina.* "Clinical and Bacteriological Researches." Thèse. Paris, 1891.

THE author first describes the sore throats of scarlatina, which may be erythematous, with or without pultaceous secretion, pseudo-membranous, or gangrenous. Pseudo-membranous angina may be early and benign, or late, and then is oftenest of diphtheritic origin. Bourges has made bacteriological researches, and thinks that scarlatinal anginas are due to secondary infection by streptococcus pyogenes, in erythematous, early pseudo-membranous, and in some cases of late pseudo-membranous anginas. It is almost always through the infected tonsils from the onset of the scarlatina that the streptococci penetrate, and it is essential to employ antiseptic washes through the mouth and pharynx. *Joal.*

Richardièrre. — *On Contagion in Acute Tonsillitis.* "Semaine Médicale," Sept. 2, 1891.

AFTER having recalled the fact that tonsillitis has just title to consideration as a general disease commencing with infection probably of microbic origin, the author maintains the opinion, after Landouzy, Bornsein, and Dubousquet-Laborderie, that the affection is contagious, and he describes two small epidemics of tonsillitis which he has observed. He believes that the contagion is diffused in the surrounding air. *Joal.*

Rendu. — *Infectious Angina followed by Paralysis of the Phrenic and Pneumo-gastric Nerves.* Soc. Méd. des Hôpitaux, May 22, 1891.

THE case of a patient, forty-seven years of age, who had sore throat, with general grave phenomena, œdema of the lateral regions of the neck, and swelling of the supra-hyoid region. A phlegmonous angina was diagnosed, localized in the sub-cellular tissue about the larynx and œsophagus. Some days later the patient rejected some mouthfuls of pus, and complained directly after of intolerable pains in the epigastric region. In respiration paralysis of the diaphragm was diagnosed, and basic pulmonary congestion. The abscess of the peri-œsophageal connective tissue was determined by propagation and neuritis of the phrenic and pneumo-gastric nerves. The diaphragmatic paralysis lasted for six weeks. *Joal.*

Rendu. — *Pneumococcean Angina.* Soc. Méd. des Hôpitaux, May 8, 1891.

A PATIENT, twenty-four years of age, was suddenly attacked with fever and grave symptoms similar to those of pneumonia or typhoid fever at its commencement. A careful examination revealed only an erythema-

tous angina. Rendu thought of an *angine à pneumocoques*, from the fact that this woman had slept near two women who had just had pneumonia, and whose saliva and sputa had been full of pneumococci. The same micro-organisms were found in the saliva of the patient, in whom, moreover, the angina was of the mildest variety. A similar case was observed during the next few days in the same room. Rendu thinks that there is an etiological variety of angina, well defined, of which the diagnosis offers no difficulty.

But according to Netter's opinion, it would appear to us that Rendu's cases are not very conclusive, for they only establish the fact that the patients had pneumococci in the saliva, but they do not prove that these organisms were the cause of the disease. At the present time we know pneumococcic infection to be revealed in the pharynx in an undoubted fashion under the form of suppurative and pseudo-membranous angina, but it is not proved that pneumococci cause follicular and simple anginas.

Joal.

Hanot.—*Streptococcal Angina followed by Purulent Pleurisy.* Soc. Méd. des Hôpitaux, May 15, 1891.

The case of a patient, fifteen years of age, attacked with a violent sore throat, with general fever and prostration. The pharyngeal mucous membrane was uniformly reddened, the tonsils were not large, and there was no deposit of membrane. Eight days afterwards a slight thickening was noticed in the neck on the right side, and with a Pravaz syringe a little flaky pus was withdrawn, which contained streptococci. Two punctures with Potain's apparatus were made at eight days' interval; the empyema was then operated upon, a litre of pus being removed through the incision. The patient died fifty days after the onset of the affection. At the autopsy small abscesses were found in the tonsils; the retro-pharyngeal cellular tissue was the seat of a purulent process which had found its way through the parietal pleura and extended to the pleural cavity. All the purulent collections contained streptococci.

Joal.

Férol.—*Amygdalitis, followed by Broncho-Pneumonia and Pleurisy.* Soc. Méd. des Hôpitaux, May 25, 1891.

THE case of a man, seventy years of age, who was affected with tonsillitis, localized on the left side of the pharynx, which was followed by pleurisy of the right side and broncho-pneumonia, and which terminated in death.

Joal.

Hallopeau.—*A Case of Sarcoma of the Isthmus of the Fauces and Pharynx.* Soc. de Dermatologie, July 9, 1891.

THESE tumours are very rare and of very difficult diagnosis, at least in the first phases of their evolution. Various physicians who had observed the case in question had considered it to be syphilis, lupus, ulcero-membranous or herpetic tonsillitis, small-pox, rhinoscleroma, benign fibrous tumour, lymphadenoma, epithelioma, or a new disease. The analogy was greatest with rhinoscleroma; the isthmus of the fauces presented an appearance quite special, and one which is scarcely ever observed in this disease; the two degenerated tonsils were excavated

in the form of a cross with an internal concavity, and their hardness resembled that of cartilage. The negative results of a bacteriological research undertaken by M. Jeanselme proved that it was not a case of rhinoscleroma, and histological examinations performed by MM. Cornil and Jeanselme showed that the nature of the disease was sarcoma. *Joal.*

Bouveret.—*Clonic Spasms of the Pharynx.* "Revue de Med.," April, 1891.

THE author describes under the term "hysterical ærophagia" a singular phenomenon which consists in rapid movements of deglutition, convulsive in nature, and accompanied with pharyngeal *bruits* leading to accumulation of air in the stomach so as to produce a veritable tympanitis. From time to time an eructation expels a portion of the gas distending the stomach, so that the attack consists of a series of movements of deglutition interrupted by eructations. These spasms of the muscles of deglutition would appear to proceed from an excessive hyperæsthesia of the mucous membrane of the pharynx. *Joal.*

Raulin.—*Cyst of the Vault of the Pharynx.* "Revue de Laryngologie," Sept. 1, 1891.

THE author has just observed two cases of cyst of the nasal pharynx, and gives a history of the subject, with symptomatology and treatment of these tumours, founded on one hundred cases which he has succeeded in collecting. *Joal.*

Roersch.—*Two Cases of External Œsophagotomy for Foreign Bodies.* "Annales de la Soc. Med. Chir. de Liege."

THE first case was that of a man, sixty-one years of age, who had swallowed false teeth. An operation performed by Prof. Winiwarter was followed by death the same evening. The second case was that of a little girl, five years of age, who had swallowed a button. An operation was performed and cure resulted in fifteen days, with no particular symptoms or results. *Hicguet.*

Rusticola.—*Parotitis as a Complication of Influenza.* "Brit. Med. Journ.," July 11, 1891.

THE writer has had three cases of this complication. In two death speedily occurred without suppuration, and after great prostration. In the third both glands have suppurated twice, and recovery is still doubtful. *Hunter Mackenzie.*

Hellier, J. B. (Leeds).—*On the Complications of Mumps.* "Brit. Med. Journ.," June 20, 1891.

THE author mentions the case of a girl, aged fifteen, in whom, after mumps, partial facial paralysis of the left side developed. The attack was transitory, clearing up in about three weeks. This complication seems of very rare occurrence.

Reference is made to the frequency with which ear and cerebral affections, and orchitis, complicate or follow mumps, and to the rarity of metastasis in the female to breast, ovary, vulva, or uterus. The supervention of parotitis after ovariectomy is established. *Hunter Mackenzie.*

LARYNX, &c.

Lichtwitz.—*Carcinoma of the Vocal Cord.*—*Laryngo-Fissure.*—*Death five days after.* Soc. Parisienne de Laryngologie, July, 1891.

THE title indicates the nature of the case.

Joal.

Gouguenheim } *Epithelioma of the Ventricular Band. Endo-laryngeal Extirpation.*—*Cure.*—*Absence of recurrence.* "Annales des Mal. des Oreilles, du Larynx, etc.," Aug., 1891.

THE title indicates the nature of the case.

Joal.

Tissier.—*Studies on Chronic Laryngitis.*—*Pachydermic Processes.*—*Medical and Surgical Treatment.* "Annales des Mal. des Oreilles, du Larynx, etc.," July, 1891.

AN excellent work, full of erudition, in which the author studies the pathological anatomy of chronic laryngitis, and especially the form described by Virchow and Rheiner under the name of laryngeal pachydermia.

Joal.

Cheval.—*Luxation of the Left Crico-Arytenoidean Joint.* "La Clinique," No. 15, 1891.

BY means of a double electrode introduced into the larynx and applied to the posterior wall, it is possible to tetanize suddenly the ary-arytenoid and posterior crico-arytenoid muscles. The luxation is instantly reduced, and is not reproduced. The author concludes his paper

(1) With remarks upon the rarity of such cases ;

(2) The probable absence of intra-articular organization, in spite of the displacement, which had lasted for six months ;

(3) The facility with which the luxation was reduced, and the harmlessness of the method employed.

Hicguet.

Goris.—*The Local Treatment of Laryngeal Tuberculosis.* "Presse Médicale Belge," No. 3, 1891.

INSUFFLATIONS of acetate of lead and morphine are recommended.

Hicguet.

Capart.—*Treatment of Laryngeal Tuberculosis by Koch's Lymph.* "La Clinique," No. 1, 1891.

THREE patients have been treated by this method, two presenting reaction and amelioration, and one without reaction.

The author reviews the opinions expressed in the "Deutsche Medicinische Wochenschrift."

Hicguet.

Ruault.—*Dyspnoic Phenomena with Glottic Spasm in a Tabetic Patient.* Soc. Parisienne de Laryngologie, June, 1891.

THE case of a tabetic patient in whom section of the recurrent nerve was performed without success. One centimetre of the nerve was resected by

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the author and Dr. Monod. The appearance of the glottis was not, however, modified by this rational experiment. The portion of the nerve resected was examined histologically, and was found to be very greatly altered. *Joal.*

Hutchinson, Procter S. (London).—*Cases of Supposed Peripheral Neuritis of Laryngeal Nerves.* "Brit. Med. Journ.," July 18, 1891.

THE author believes that the cases here recorded point to the existence of a peripheral neuritis of the motor nerves of the larynx, possibly similar to that which occurs in cases of paralysis of the portio dura (Bell's paralysis), and due to the same causes—exposure to cold and rheumatism. He records five cases of this affection. The prognosis as regards cure appears to be unfavourable. *Hunter Mackenzie.*

Cartaz.—*Double Paralysis of the Posterior Crico-Arytenoidei in a Case of Aneurism of the Aorta.* "Archives de Laryngologie," July, 1891.

THE case of a man, fifty-five years of age, with an aneurismal tumour, and presenting laryngeal signs of paralysis of the abductors. The cords occupied the median position, and the free edge was slightly concave. Laryngoscopic examination in a state of semi-anæsthesia showed the cords to occupy the same position, thus negating all idea of spasm. *Joal.*

Garel.—*Acute Benign Infectious Œdema of the Larynx.* "Annales des Mal. des Oreilles, du Larynx, etc.," July, 1891.

THE author relates two cases of the above condition which ended in resolution, after having presented grave conditions. *Joal.*

Renou.—*Forced Dilatation of the Larynx in Croup.* Soc. Médicale d'Angers, May, 1891.

ACCORDING to the author the construction of the larynx in croup is the consequence of a spasm. It is then an indication to force the glottic sphincter by dilatation as would be done with the anus. The following proceeding is to be followed: The child is held on the knee of an assistant before a window, the opening of the mouth is assured by means of a button introduced between the teeth, the tongue is seized and drawn out with forceps. A dilator is then slid into the larynx, and manipulated in such a fashion as to break through the constriction. Renou applied this method in the case of one infant which he cured. *Joal.*

Périer.—*Foreign Body in the Larynx extracted by Laryngotomy.* Acad. de Méd., June 9, 1891.

THE case of a little girl of thirteen, who, in eating a ragoût, swallowed a small bone. Four hours after, tracheotomy was performed, but the bone was not extracted. Some days after, the patient came to the Lariboisière Hospital, when it was found that a lamella, of whitish appearance, and four to five millimètres long, was fixed in the mucous membrane of the larynx, below the glottis and parallel to the vocal cords. It occupied the whole length of the subglottic region. Laryngotomy was performed, and the foreign body extracted, the wound cicatrizing rapidly, and cure is now complete. *Joal.*

Nicaise.—*Physiology of the Trachea.* Academie de Médecine, August, 1891.

THE trachea is not a rigid tube ; its diameter and length continually vary under the influence of respiration or phonation. During expiration it is dilated and lengthened, and during inspiration it is narrowed and shortened. During phonation it is distended, particularly in singing and in sharp cries. When raised sounds are produced it is dilated. These elastic properties have a certain importance, and the alterations and loss of contractility are not without inconvenience. The commonest accident observed is in persons who are compelled to utter cries much, and that is an aneurismal dilatation, especially of the cervical region of the trachea, of which the consequence is complete aphonia. In order to obtain regular phonation, it suffices to obtain regular compression of the trachea in order to prevent dilatation. This compression may be exercised by the fingers or a kind of collar. *Joal.*

Wright (Brooklyn).—*Tracheal Syphilis, with Report of Two Cases.* "New York Med. Journ.," June 13, 1891.

ONE case died of syphilitic pneumonia, and the other of lung mischief and exhaustion, there being found extensive ulceration in the trachea in its entire length, and at a point two inches below the larynx there was almost complete stenosis.

Mauriac's diagnostic points between tracheal and laryngeal dyspnœa are mentioned, and are as follows when it is of tracheal origin :—

1. Constrictive pain along the trachea or behind the sternum.
2. Excessive stridor, having its greatest intensity below the larynx.
3. Preservation of the voice.
4. Integrity of the vocal organs.
5. Lowering of the larynx.

Several authors are quoted, and there is a good list of works referred to, at the end of the paper. *B. J. Baron.*

THYROID GLAND, &c.

Goucqes.—*On the extent of the Visual Field in Basedow's Disease.* Soc. de Biologie, May 18, 1891.

CONTRARY to the assertions of Kart and Wilbrandt, the author's researches lead him to the conclusion that contraction of the visual area is not among the symptoms of Basedow's disease, and that its presence in the absence of material lesions of the encephalon visible in the fundus or middle of the eye should cause the observer to think of the co-existence of hysteria. *Joal.*

Charcot.—*Basedow's Disease.* "Journ. de Med. et Chir. Pratique," July, 1891.

THIS was a lecture given at the Salpêtrière, in the case of a patient affected with very characteristic tremor, predominating in the hands, but also occupying the whole body, a kind of general vibration which

suffices to establish the diagnosis of Basedow's disease. There were besides, tachycardia, exophthalmos, feeling of heat at night, but no goître. Besides these common symptoms, the patient had fallen twice without vertigo or loss of consciousness, the limbs giving way suddenly under him, a phenomenon which is met with in ataxia, and which Charcot believes to indicate the onset of paraplegia in Basedow's disease. *Joal.*

Weill } *Exophthalmic Goître and Rheumatism.* Soc. de Méd.
Diamantberger } Pratique, July, 1891.

THE authors related eighteen cases, which have convinced them that there is an intimate affinity and relationship between these two conditions. *Joal.*

Bradshaw, T. R. (Liverpool). — *Case of Graves' Disease complicated by Hemiplegia and Unilateral Chorea.* "Brit. Med. Journ.," June 27, 1891.

THIS case is interesting chiefly on account of the complication with chorea and hemiplegia, and the good results of treatment (belladonna, followed by arsenic and iron). *Hunter Mackenzie.*

Stokes, Sir W. (Dublin). — *Operations on the Thyroid Gland.* Royal Acad. of Med. in Ireland, May 15, 1891. "Brit. Med. Journ.," July 11, 1891.

IN the discussion which followed the reading of this paper Mr. Thornley Stoker stated that he had arrived at the following conclusions :—(1) That it is a very grave matter to remove even a portion of the thyroid, on account of the fearful hæmorrhage that may ensue. (2) That removal of the entire gland was not justified. (3) Division of the isthmus did not seem to do much good. (4) That thyroidectomy was too grave an operation to be undertaken for mere cosmetic purposes. (5) That undoubtedly removal of half the gland had been followed by shrinkage of the remaining enlarged portion. Mr. McArdle mentioned that in some of his cases collapse occurred whenever traction was made on the mass; this he supposed was due to the stretching of the cardiac nerves. This collapse was on all occasions relieved by replacing the tumour. In resection of the isthmus the ligatures should be slowly drawn, and the section made some distance therefrom. *Hunter Mackenzie.*

Berry, James (London). — *Lectures on Goître: Lecture II.* Delivered at the Royal College of Surgeons of England. "Brit. Med. Journ.," June 20, 1891.

THIS lecture deals with the treatment of parenchymatous goître, and the subject of injection is first discussed. Reference is made to a series of cases in which surgeons have lost healthy patients from the injection of iodine into a goître, death occurring either on the operating table or within a few hours after the injections. "These cases," says the lecturer, "show pretty clearly that injection of iodine is an operation by no means devoid of danger, even when carefully performed, and when only a small quantity (two minims of the tincture) is employed."

The introduction of a seton is, in the lecturer's opinion, too dangerous to warrant its recommendation for any kind of goître. A large vessel may be transfixied, or inflammation, cervical cellulitis, and pyæmia may be induced.

Ligature of the thyroid arteries has been beneficially performed in early cases of parenchymatous enlargement. The lecturer remarks upon the difficulty of ligaturing the inferior arteries, on account of their deep situation and close proximity to the sympathetic nerve.

Regarding division of the thyroid isthmus, the lecturer's conclusions are—"That division of the thyroid isthmus may relieve dyspnœa mechanically, by allowing the two halves of the goitre to separate, but that it more often does so by draining the gland of its colloid secretion. That the relief afforded may be permanent, but that frequently the goitre reappears when the wound has healed, and the secretion is again pent up in the gland. That in many cases in which very urgent dyspnœa is present a mere division of the isthmus will not relieve the dyspnœa sufficiently quickly, and it is necessary to do some further operation, either tracheotomy, or, much better, removal of some considerable portion of the goitre."

The lecturer next speaks of extirpation of a portion of the gland in cases of parenchymatous goitres, or of those which are in the main parenchymatous, and consist of a fairly uniform, bilateral enlargement.

(1) Total extirpation is not now recommended on account of the grave after-results (cachexia strumipriva) which usually follow.

(2) Partial extirpation (*a*) of one lobe. The varieties of skin incisions are the vertical, the oblique, the angular or curved, and the transverse. The vertical incision is most suitable for small goitres situated near the middle of the neck. The oblique is considered the best for nearly all cases. The lecturer proceeds to describe the *technique* of the operation and the after-treatment, for details of which reference should be made to the original papers. (*b*) Mikulicz's resection. The object of this is to remove the chief part of one or both lateral lobes, and to avoid all risk of wounding the recurrent laryngeal nerves. At the same time enough thyroid tissue is left behind to carry on the function of the gland. The method of performing this operation, and also Prof. Koch's modifications of it, are fully described by the lecturer. (*c*) Resection of the isthmus. The lecturer does not recommend this operation, for the reasons already stated in speaking of its division.

Hunter Mackenzie.

Berry, James (London).—*Lectures on Goitre: Lecture III.* Delivered at the Royal College of Surgeons of England. "Brit. Med. Journ.," June 27, 1891.

IN this lecture, the different varieties of cystic goitre are briefly described, and their treatment, by simple tapping, by injection, and by drainage, discussed, and the dangers of each method described.

Intra-glandular enucleation (of cysts or of solid tumours) is next referred to in detail, and its indications, contra-indications and advantages enumerated. Following Kocher, he considers enucleation to be suitable in (1) cystic goitres, in which most of the tumour is formed by a single cyst; (2) isolated large solid tumours which lie embedded in comparatively healthy gland tissue. The cases not suitable for enucleation, according to Keser, are (1) cases of diffuse hypertrophy, in which the whole gland is uniformly enlarged; (2) malignant goitre (carcinoma and

sarcoma); (3) goitre in which, besides one or more large nodules which appear to call for surgical treatment, numerous small nodules are disseminated throughout the gland. In such cases it is highly probable that, after removal of the larger tumour, the smaller ones would continue to grow; while to remove all by enucleation would be impossible.

Fibro-adenomatous goitre and malignant disease of the thyroid is next mentioned. In regard to the latter, the lecturer is of opinion that removal of the disease should very rarely be attempted, and that we should rest satisfied with tracheotomy.

Death has often occurred during the operation, generally from dyspnoea, hæmorrhage, or shock. It sometimes occurs at the very beginning of the operation, either just before or just after the first incision has been made. Other complications of thyroidectomy are then mentioned, including injuries to various arteries and veins, to the recurrent, laryngeal, sympathetic and vagus nerves, and to the trachea and pleura. The great importance of keeping the wound aseptic is insisted upon, and the frequently fatal results of suppuration in the wound are described. Tetany and tetano-epilepsy are serious and not uncommon complications.

The lecturer refers to cachexia strumipriva, one of the most important remote results of thyroidectomy. He comes to the conclusion "that if the gland be completely removed, there is a very great risk that cachexia strumipriva will supervene, although it is not absolutely certain that it will do so in all cases." It appears that cachexia strumipriva has in some cases followed partial removal. This is, however, of rare and temporary occurrence.

The lecturer concludes by referring to the effects of transplantation of normal thyroid tissue into the subjects of cachexia strumipriva and myxoedema, and he says that "the information that we have, although not very encouraging, is, on the whole, sufficient to warrant us in giving the operation a further trial before concluding definitely that it is a failure."

Hunter Mackenzie.

Parker, W. Rushton (Kendal).—*Induration of Sterno-Mastoid in New-Born Children.* "Brit. Med. Journ.," June 20, 1891.

THE author shortly describes two cases of this now well-recognized affection.

Hunter Mackenzie.

NOTE.

THE BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION.

THE next Meeting of this Association will be held in London on November 27th. There will be an afternoon Session, at which an important discussion will take place upon the Treatment of Deviations of the Nasal Septum.

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Editorial Communications are to be addressed to "Editors of JOURNAL OF LARYNGOLOGY, care of F. A. Davis, 40, Berners Street, London, W."

On account of the complete Report of the Transactions of the British Laryngological Association, most of the "Abstracts" and other matter have been crowded out.

ASSOCIATION MEETING.

BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION.

General Meeting, Friday, November 27, 1891.

The President, Mr. LENNOX BROWNE, in the Chair.

THE minutes of the last General Meeting were read and confirmed. The following gentlemen were unanimously elected Fellows of the Association :

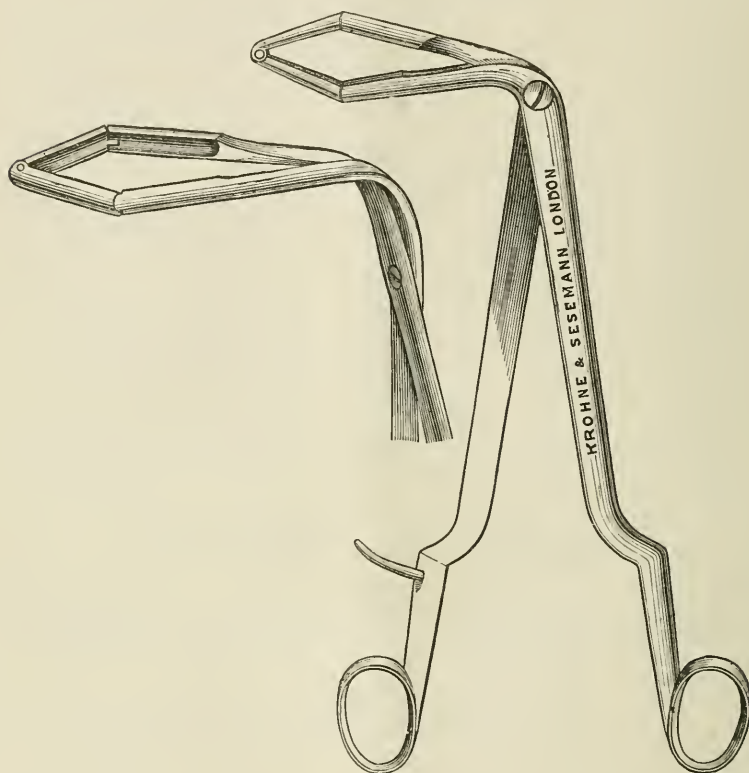
Dr. F. VICARS, London.

Dr. NEIL, Macgillycuddy, Bournemouth.

The Hon. Secretary read a Statement of Accounts, showing a balance in favour of the Association of £63 18s. 10d.

It was proposed by Dr. MATHESON, seconded by Dr. WOLFENDEN, and passed unanimously :—"That the accounts shall be duly audited, "printed and forwarded to each member of the Association, at the end "of each financial year, and that two auditors shall be appointed by the "Council, one from the general body of the Fellows, and one from the "Council."

Dr. DUNDAS GRANT, on the invitation of the President, showed a *Guarded Laryngeal Forceps*, of his design. He described it as a Mackenzie's cutting-forceps, to the end of each blade of which was hinged a prolongation, also with cutting edges. These prolongations were jointed together at their distal extremities. The result was that when the forceps were opened, by separating the handles, the



blades proper opened like the limbs of the letter A, the prolongations, on the other hand, like those of the letter V. There was thus formed a lozenge-shaped space into which an outgrowth readily slipped. It would be easily seen that the instrument could be passed into the larynx with perfect safety. It was intended for the removal of growths projecting into the glottis from the sides of the larynx, not for those on the upper surface of the cords. The instrument was made in two forms, one with lateral, the other with anterior and posterior blades.

Mr. MARK HOVELL said he was prepared to criticize the instrument but hoped that Dr. Grant would accept his remarks in good part.

He considered the instrument ingenious, but, in his opinion, it was so safe that it was practically useless. It was only applicable for the removal

of growths from the central portion of the sides of the larynx, but all present knew that frequently, when there were growths in this position, there were others also attached to other parts of the larynx, and these other growths were sometimes found involving the upper surface of the vocal cords.

Dr. Grant had admitted, however, that his forceps were not suitable for removing growths in the latter situation. Dr. Grant had described the instrument as Mackenzie's forceps guarded, but in his opinion they were Mackenzie's forceps spoiled.

The lateral forceps which Dr. Grant had alluded to, but had not shown, for removing growths from the commissures, would be of but little use for the removal of growths from the anterior commissure. In order to remove a growth from this situation, it was necessary to pass the anterior blade of Mackenzie's antero-posterior forceps between the base of the growth and its attachment, the posterior blade being merely closed on the growth to prevent it from falling into the larynx. The space in the anterior commissure was so narrow, being merely the point of the V-shaped opening, that it would scarcely admit the width of the blade of Mackenzie's forceps, and certainly would not allow Dr. Grant's forceps to be introduced and dilated to the width of the growth.

Dr. Grant's forceps might perhaps be used for a growth attached to the posterior commissure, but, even then, he thought the extension downwards of the blades would prevent as much of the growth being removed as could be taken away with Mackenzie's forceps.

Dr. GEORGE STOKER said the forceps were very ingenious and their construction very interesting. His view was that when one used that kind of instrument there was no chance of seeing anything beyond the forceps; and he maintained that to remove a growth with certainty to the patient and justice to the operator, it was indispensable to see what one was about. This criticism applied not only to these forceps, but to all instruments of the kind.

The PRESIDENT said he had not had any opportunity of seeing the forceps used, and it was difficult either to praise or condemn an instrument until it had been submitted to that test. It certainly seemed to offer something in the way of a guard, which Mackenzie's did not. Moreover, there was a better chance of securing one's hold on the growth and preventing slipping. Personally he had never introduced an unguarded instrument into the larynx, yet it was very seldom that he met with a single growth which he did not remove at the first attempt. He thought the snare was *par excellence* the instrument for removing growths from the anterior commissure. There was great difficulty in getting at the base of the growth in the anterior commissure with any sort of forceps, antero-posterior or lateral, though he would in such cases prefer a lateral pair. With reference to the necessity for seeing the growth they must in all cases be prepared, even with the use of cocaine, for some closure of the larynx, and learn to guide the instrument from knowledge of its situation, and they must, to some extent, work in the dark. Still it was a manifest advantage to have an instrument which took up the least space, and so

far he was in agreement with Dr. Stoker. He thought Dr. Grant's instrument would enable them to get closer to the growth with safety than was sometimes possible with a snare in the case of smooth and hard non-pedunculated neoplasm.

Dr. WARDEN (Birmingham) said he had been very much struck with the absolute safety offered by this instrument. Even if one failed to catch the growth, at least they would do no harm. One met with many of these growths lying underneath the cords, and then he imagined it would be quite possible for the growth to slip out of the grasp of the instrument.

Mr. WINGRAVE had seen the forceps used and was quite satisfied as to their practicability.

Dr. GRANT, in reply, thanked those of the speakers who had approved of his invention, in which he admitted he took a paternal interest. Personally he was disposed to advocate the greatest eclecticism in the choice of instruments. He contended that they could not have too many instruments, or too many modifications of instruments. The same rule applied here as with the dentists. Mr. Hovell had observed that the anterior commissure was a most unfavourable part of the larynx for his forceps to work in, but that was no reason for enlarging to such an extent upon the objections to its use in that narrow sphere of action. It was a pity to concentrate his attention upon objections which were so limited in their scope. As he (Dr. Grant) had said before when advocating the use of unguarded instruments, the anterior commissure was the seat of election for the use of the wire snare, and not for forceps at all. He asked Mr. Hovell to be good enough to give the forceps a trial, and to let them know the result. He himself had recently used the instrument to remove a growth from the edge of the vocal cord, and it had answered very well.

The PRESIDENT showed a girl, aged eighteen, living at home in her family with a *Primary Chancre of the Cheek*. He called attention to the unusual situation for such a lesion, and said it was very difficult to get at any history of the source of infection. It was just at the angle of the jaw, and the patient stated that it had first appeared as a painless pimple, which subsequently formed a scab. It had been treated by black wash, and she was having internal treatment suitable to the diagnosis. The glands were very much enlarged and there could be no doubt at present as to the nature of the lesion. (Since the exhibition of the case it has been elicited that about a month before the appearance of the pimple she was bitten on the cheek by a man who at the time was suffering from a sore-throat.

Dr. DUNDAS GRANT showed *Two Cases of Stenosis of the Larynx due to Tertiary Syphilis*. In one the dyspnoea was so intense that operative interference was called for. Intubation was attempted, but there was such a dense constriction below the glottis that no benefit was effected thereby, and tracheotomy had to be performed. The other was a much less advanced case and was expected to respond to specific treatment.

Mr. HOVELL showed a *Case of Malignant Disease of the Thyroid Gland* and one of *Epithelioma of the Vocal Cord*.

MICROSCOPIC AND OTHER SPECIMENS EXHIBITED BY MR. WYATT
WINGRAVE.

1. Section from a *thyroid growth*, which shows numerous round masses composed of concentrically arranged elements, similar to Hassell's corpuscles of the thymus gland (also shown).

2. Bodies of strikingly similar characters are present in this section which was taken from a *growth attached to the dura mater*. These are considered corpora-amylacea, and occur frequently in the meninges of both brain and cord, normally. (Stained with hæmatoxylene.)

3. *Colloid Epithelioma of the Thyroid*.—The characteristic "cell nests of stratified epithelioma are well shown to be undergoing a colloid change. It is interesting as being a primary growth in this situation. (Hæmatoxylene and eosin.)

4. *Sebaceous Adenoma of Lip*.—Large saccules or alveoli with thin walls are filled with small spheroidal cells, retaining the original type. It was removed from a woman aged sixty, having been five years in growing. Size of growth equal to that of a cob-nut. (Hæmatoxylene.)

5. *Transverse and horizontal sections of Skeletal Muscle Fibres* undergoing "*Zenkers degeneration*."—There is a considerable increase of the inter-muscular cells and the "cloudy or waxy" character of the fibres is in strong contrast with the natural striation. From a case of laryngeal and pulmonary phthisis. (Hæmatoxylene.)

6. *Interstitial Myocarditis in Diphtheria*.—The fibres show cloudy and granular changes, with a marked increase of the interstitial cells in the centre of each fibre; clustered around the nucleus will be seen pigment granules.

7. A vertical section through the maxilla and ethmo-vomerine plate of a young deer: showing Jacobson's organ partly surrounded by its cartilage, and attached to the lower extremity of the cartilaginous septum. From the upper third of the septum a tubercle or spur will be seen projecting opposite the interval between the lower and middle turbinated bodies.

A dry specimen taken from a child, aged six years, showing the *Condition of the Nasal Septum* at that period.

A macerated specimen, illustrating the *Development of the Cranial base*. (Kindly lent by Mr. Bland Sutton.)

DR. DUNDAS GRANT on *Lichtwitz's Method of Exploratory Puncture and Irrigation of the Antrum through the Inferior Meatus*.

I had the pleasure a few months ago of reviewing M. Jeanty's brochure on "*Latent Empyema of the Maxillary Antrum*," detailing the method to which I wish to draw your attention. It is now no longer necessary to employ the term "*latent*" to these cases in the way in which it was at first used. The latency is relative, and the cases originally so described are quite obvious in the present state of our knowledge of the subject. The antral empyemas which were not latent were cases presenting the symptom peculiar to distension of the cavity. We now know that it is a rare thing for purulent exudation to cause distension of the

antrum, and, according to Virchow, when there is distension, it usually depends on the presence of a cystic tumour.

That the diagnosis of empyemas is in many instances provisional only, until some form of exploratory puncture has been practised, will, I think, be allowed by all candid observers. In a very large—probably by far the largest—number of cases, the symptoms and signs are to us quite unmistakable; but we can never make assurance too sure, and a simple method for making a confirmatory exploratory puncture before extracting a tooth or boring through the alveolar process is surely not an unwelcome addition to our routine practice.

Lichtwitz's method, which I have practised in a number of cases, consists in the penetration of the antrum by means of a fine trocar and canula pushed through the outer wall of the inferior nasal meatus and the subsequent irrigation of the cavity by means of a suitable syringe fitted into the canula. The fluid contents are then washed out through the natural orifice of the antrum, and the presence or absence of any reasonable amount of pus verified.

The *instrument*, as described by Jeanty, is a straight trochar, of ten to twelve centimètres in length and having a diameter of a millimètre and a quarter to a millimètre and a half. The canula is made of steel. I may



add that I find a shorter instrument, the canula measuring three inches, the trochar three and a half, more convenient; and that, in view of the narrow calibre of the canula, I have added a small funnel-shaped tube to the proximal extremity of the instrument, so that an ordinary syringe may be easily adapted to it.

The *preliminary measures* consist in the clearance of the nose by blowing, and the use of some form of douche or syringe (I use a solution of borax and boracic acid or a weak solution of lysol with Lefferts' coarse spray). The inferior meatus is then cocainized, and for the purpose of this operation I think it is better to apply the solution on a pledget of cotton-wool which can be pushed underneath the inferior turbinal rather than by means of a spray.

The *puncture* is accomplished by introducing the instrument, with the trochar, drawn within the canula, as far as the middle of the inferior meatus, the point being directed as much outwards and upwards as possible. At this stage I find it necessary to remove the speculum, as the handle of the instrument has to lie across the middle line. The point of the trochar is then protruded and carefully pushed through the thin inner wall of the antrum. A warm, clear, antiseptic solution (borax and boracic acid) is syringed into the canula, from which the trochar has been withdrawn, and the liquid contents of the antrum driven out through the normal opening. The patient's head should be bent forwards, so that the escaping fluid may be caught in a clean basin for inspection by sight and smell.

The *sources of difficulty* are very few. There is a tendency not to push the point sufficiently outwards, so that instead of perforating the

wall of the antrum we perforate the upper part of the inferior turbinal, and the fluid injected passes simply into the pharynx and sets up an amount of choking, by which the error—which only requires mentioning—may be recognized and corrected. It may be necessary to select a second point for puncture if the one first chosen is found to be too resistant.

I have employed the method in about a dozen cases with every satisfaction, both positive and negative results being obtained, very much—I am bound to say—as I was prepared to expect from my analysis of the other signs present.

Jeanty points out a *possible fallacy*—i.e., in case of the antrum being divided by a septum, a negative result may be obtained owing to the canula entering and irrigating one compartment which may be healthy ; while the other compartment may be the seat of an empyema to which the troublesome symptoms are due. This is, however, an occurrence of the utmost rarity.

The *scope* of this proceeding must not be mistaken. It is simply intended for diagnosis and not for treatment. At the same time the astonishing and convincing relief we are able to afford the sufferer before leaving our own consulting room by this simple means is calculated to encourage patients to submit to Cooper's classical operation, who might otherwise have hesitated to approach the redoubtable "dentist's door."

I can look back on cases in which, could I recall the past, the prompt adoption of this exploratory irrigation would have been eminently satisfactory.

Dr. STOKER said as he had a case of the kind recently, he was glad to have the opportunity of expressing his opinion on the procedure mentioned, and on other points connected with the consideration of abscess of the antrum. This method would, perhaps, be serviceable, but his experience was that the only symptom which usually led them to form a diagnosis of abscess of the antrum was the escape of pus from the natural aperture of exit, through the opening into the meatus of the nose. There might be pain at the same time. For purposes of diagnosis, therefore, the method could not be said to be necessary. With regard to treatment, he thought it was still less necessary.

Dr. GRANT said he had expressly stated that the method was not intended for purposes of treatment.

Dr. STOKER said that was so ; but even if Dr. Grant did not use it for purposes of treatment, others did so. From this point of view it was not to be commended, because the opening was not at the most dependent part. He thought the proper course was to take out the tooth. Dr. Grant certainly spoke of irrigating the antrum by the artificial opening, in order to compel the offensive fluid to flow out higher up. He himself thought it would be better to irrigate from above, and to force the fluid down.

The PRESIDENT said that the diagnosis was really not very difficult. If they saw pure pus issuing from the upper part of one nostril, of the offensive character of which the patient was conscious, they might be almost sure that they had to do with a case of empyema of the antrum, even without any

special knowledge, and particularly if there was a history of toothache. The President said this method he advocated for purposes of diagnosis constituted a system of treatment, which was no new thing, for it had long been employed by Stöerk, instead of clearing the cavity out through the socket of the tooth. He observed that during the first ten years at the Throat Hospital he never saw a case of abscess of the antrum. It was not even recognized although Mr. Spencer Watson had mentioned it in the first edition of his book, and the first cases were shown by himself at the Harveian Society in 1879. He never had any difficulty in diagnosing it, and he could only remember one case in which he had perforated and did at once come upon any pus. Curiously enough, however, in twenty-four hours there was a copious discharge of broken-up caseous *débris*, with after-discharge of pus. When one spoke about taking out a tooth he would remind them that the history was usually that the patient had complained of toothache. The tooth had been extracted, and some time afterwards there had been a discharge of pus from the nose. Consequently there was no need to pull out a tooth or make an incision. He preferred a treatment which would be directly curative, and not only diagnostic. He thought that the attempt to demonstrate the transparency of the contents of the antrum by elaborate means was an utter refinement of diagnosis and quite unnecessary. With all respect, he thought the present method came under the same category.

Mr. WINGRAVE said that he was able to emphasize the diagnostic value of the method, and recalled Dr. Grant's attention to a remarkable illustration in his own *clinique*. The patient complained of an unpleasant smell of many years' duration; nothing was discovered by inspection, but syringing of the antrum by Lichtwitz's canula (which demonstrated pus) was followed by violent sneezing, after which huge masses of fœtid caseous matter were blown from the nostrils. Subsequently a large opening was discovered leading to the maxillary sinus further back than the normal hiatus.

Dr. STEWART said it might be within the recollection of his listeners that he had read a paper at Bournemouth to show that it was possible to diagnose most cases of abscess of the antrum by syringing it through the natural opening. Dr. Grant said it was often impossible to find the opening in the middle meatus of the nose, and it might be that sometimes there was no opening. He had, however, treated several cases during the last few years, and had no difficulty in diagnosing them by the natural opening. He took a metallic catheter, bent rather more than normal, and with a little care he generally managed to introduce it easily enough. If necessary, a hilum should be used. He believed that in all cases the antrum might be so syringed. If one of the most characteristic signs of the affection was the discharge of pus by the nose, that showed that there must be a natural aperture to be found with a little trouble. With regard to using it as curative treatment, it was well known that a surgeon in Cracow (Mickowitz), read an interesting paper on this subject some years ago, and he contrived a kind of chisel at right angles, with which he penetrated the anterior wall and washed out the cavity.

Dr. GRANT, in reply, urged that there ought to be in a young and progressive society like this a greater spirit of receptivity. It was his duty to ransack the literature of the subject to get abstracts for their Journal, and so soon as he came across something which appeared to him of interest and novelty he hastened to bring it before them both in the Journal and at their meetings. He agreed with everything that had been said as to the escape of pus through the natural passages. When this welled up under the middle turbinated bone it was pretty certain what was the nature of the case, but they would remark that several observers had been led into errors of diagnosis by allowing themselves to be guided by this symptom alone. He mentioned an example of a case of disease of the turbinated bone simulating abscess of the antrum. There was also a very interesting observation published by Greville Macdonald of cyst and abscess of the middle turbinated body simulating antral disease. They all doubtless knew a good deal about this affection, but surely even the youngest and the stupidest¹ of them must feel that he was not infallible (the wiser ones felt so), that finality had not been reached, and that more might still be learned about it. As to the irrigation being preferable from above, that was certainly a very good plan, but if, as was often the case, the turbinated bone was much swollen, the orifice would be difficult or impossible to find. In reference to the proposal to pass the trocar through the middle meatus he pointed out that the higher they went the greater was the risk of puncturing the orbit. Consequently it was much safer from the inferior meatus. He admitted that if, in certain cases the aperture was more difficult to find than usual, it was in a certain proportion of cases larger than normal, and therefore easier to light upon. No one would dispute that the sacrifice of a tooth which could be retained was something to regret. Moreover, supposing there was more than one diseased tooth it was not easy to say for certain which tooth was the one in fault. That hypothesis, too, assumed that the teeth were always the cause of the disease. Personally, he thought they were, but many very respectable observers had come to the conclusion that in the majority of instances the affection arose from disease in the nose. It was possible that some of the cases did arise thus, and he suggested that we might see our way to establish a classification by saying that the cases which were cured by irrigation were of nasal origin, while the others were due to disease of the teeth. He merely threw this out as a suggestion. The best way to arrive at a right conclusion in deciding which method to pursue, whether to sacrifice a tooth, or to employ Lichtwitz's simple method of exploration, was to apply the argument to their own persons, when he thought they would experience very little hesitation.

The PRESIDENT pointed out that even if a diseased tooth were the starting point, it would not suffice to keep up the abscess if treated by irrigation.

¹ "We are none of us infallible, not even the youngest of us," has said the Master of Trinity College.—D. G.

Dr. MIDDLEMISS HUNT'S paper on *A Case of Croupous Rhinitis*.

On the 28th of August of this year I was consulted by a lady, the wife of a medical man, regarding a nasal trouble of which she gave the following history.

Ten days previously she was attacked with what seemed to be an ordinary cold in the head, with profuse, one-sided discharge, and complete, continuous obstruction of the right nostril. She also complained of a very disagreeable smell in the nose. At the onset of the attack there had been slight rise of temperature (100.2° F.), but for a week it had been normal. She did not feel ill, though for the previous six months she had not been in her usual health.

On examining the nose, the obstructed side was found to be lined throughout, so far as one could see, with a thick, white membrane, bathed in a watery discharge. On the left side the mucous membrane was swollen and congested, but without any trace of deposit on its surface.

On removing a portion of the false membrane from the septum, to which it was loosely attached, a raw and slightly bleeding surface was exposed. I found it impossible to get a large piece of membrane as it tore so easily in trying to remove it.

After removing most of the membrane, I insufflated some iodol and gave the patient an alkaline and antiseptic spray to use. When she returned next day, the surface was again covered with false membrane, and a similar condition had now developed on the tonsils. Here the membrane was of the same character as in the nose, but on removing with forceps no bleeding occurred.

For the next four days, though I removed the membrane from the nasal cavity daily, it was always replaced in twenty-four hours. The tonsillar membrane did not recur after removal and the application of a solution of argent. nitr. (12 per cent.).

The false membrane in the nose ceased to form about the fifteenth day from the commencement of the attack, and was followed for a week or ten days by a muco-purulent discharge.

I should mention that there was no diphtheria in the neighbourhood at the time, nor did any member of the household—one of whom was a child—become infected. There was also no glandular enlargement, and the post-nasal space remained free of membrane.

Examined microscopically, the exudation consisted of a basement membrane of fibrin, partly fibrillous and partly granular, with numerous leucocytes and some epithelial cells.

From the complete absence of any general symptoms, I regarded this case as one of croupous rhinitis, a disease first differentiated by Hartmann, in 1887 (*"Deutsche Med. Wochenschrift"*), when he recorded six cases, all in children. Since then a number of cases have been put on record by German and American writers, and a chapter is devoted to this affection in all recent text-books. As I have not observed any cases, so far, from an English source, I have brought this one before the Society in order to give the members an opportunity of expressing their opinions on a disease that at present occupies a somewhat doubtful position, both as regards its cause and its pathology.

Even the clinical picture of croupous rhinitis is by no means clear. Some describe it as a febrile affection throughout, and accompanied by marked constitutional disturbance; others, as non-febrile, and entirely local in its effects. Again, while Bosworth regards the fact that the membrane can be easily removed, and without hæmorrhage, as pathognomonic, Potter (JOURNAL OF LARYNGOLOGY, 1889) states that the membrane can only be removed with violence, leaving a bleeding surface. The duration of the disease, too, appears to vary within wide limits, extending from eight days to five weeks.

One of the most interesting points to notice is the frequent connection of croupous rhinitis with a follicular tonsillitis, or with true fibrinous deposit on the tonsils, conditions which are recognized to be often of septic origin, and sometimes hard to differentiate from diphtheria.

Croupous exudation in the nasal passages would probably be found to be not at all uncommon if all cases of acute rhinitis, especially in children, were carefully examined. Potter states it as his opinion that it occurs in two per cent. of such cases.

The PRESIDENT said he had not seen a case of the kind, and so far as he was aware, this was the first of the kind recorded in this country. He asked whether there was any suspicion of insanitary conditions in this case, and whether there had been any subsequent neuroses.

Dr. GRANT agreed that the case was quite new *apart from traumatic causes*. A somewhat similar condition sometimes followed the use of the galvano-cautery, and French writers called it *diphthérie de la plaie*. A chronic condition in a case under his notice occurred a few weeks ago, in which there was a constantly recurring deposition of membrane upon the conjunctiva, over the stump of an eye which had been removed. He had been requested to ascertain the condition of the nose, and he found, under the inferior turbinated bone, a white pultaceous membranous deposit just at the region where the duct opened.

Dr. WARDEN asked whether any bacillus was found on microscopic examination.

Dr. HUNT said it had not been examined for bacilli.

Dr. STEWART asked whether the urine was examined and whether any albumen was found. He never remembered to have seen a case like it.

Dr. HUNT, in reply, said that the patient was the wife of a doctor who believed the house to be in good sanitary condition. Moreover, there were children in the house, and none of them had suffered before or since from any affection pointing to sanitary defects. There had been no subsequent neuroses. The case had been examined by her husband and by Dr. Campbell, of Liverpool, who at once said that whatever else it might be it was not diphtheria. This condition was, he admitted, seen after the use of the galvano-cautery, but then it never spread—at least, not that he knew of. Of course a possibly traumatic origin was his first supposition, but he had been unable to make out anything of the kind. Numerous micro-organisms were found in such membranous deposits, but nothing specific.

The urine had been examined before he saw the patient and was declared to be all right.

The PRESIDENT recalled a case reported by Dr. Reed, of Canterbury, in which a similar condition had been caused by the accidental entrance into the nostrils of the contents of a bottle of eau de Cologne.

Dr. HUNT said he had treated it at first as a local disorder.

PRESIDENTIAL ADDRESS:

A QUARTER OF A CENTURY'S RETROSPECT OF LARYNGOLOGY.

By LENNOX BROWNE, Esq., F.R.C.S.E

THE first obligation of this chair is to tender my cordial thanks to the Fellows of this Association for electing me their president during the fourth year of its institution, and my next to justify my election, not only by a diligent performance of the duties attaching to the office, but, as has become the custom, to offer some remarks worthy of the consideration of the distinguished specialists over whom I have the honour to preside, and of those other eminent members of our profession generally whom I have the pleasure to see on this occasion.

It is now upwards of a quarter of a century since I first began to specially apply myself to laryngology, and I have thought that we might be usefully occupied this afternoon in taking a retrospect of the progress which that science has made during this period—a progress which has broken down all the barriers which were first raised against it, as the result of unreasoning and unreasonable prejudice, and also one which may encourage us to strive for still greater perfection in our work, and a still higher appreciation from without of our power to aid and supplement the noble aims of the general professors of medicine and surgery. At the time of which I speak (1865) the only hospital for special treatment of diseases of the throat was that in Golden Square, founded as a dispensary by Dr. Morell Mackenzie in 1863. Not for the purpose of amusement, but as a warning to those content with knowledge as it is, and as an encouragement to those who desire to advance it, we may usefully recall the abuse with which the birth of this institution was assailed, though in this respect it has never been in worse case than was, in its early days, the Royal London Ophthalmic Hospital, founded in 1805, and now admitted, in spite of its special character, to occupy one of the highest positions amongst the charities of this metropolis. The *Lancet* even some years after its establishment spoke of this noble institution as an “infirmary shop for the reception of gulls,” as an “ophthalmic warehouse,” as “a shop for cutting out eyes,” etc. In like manner the laryngoscope, when first introduced fifty years later by Garcia, was received with coldness, and, although his statements of the movements of the vocal cords in singing, as seen by the mirror, were never actually disputed, and were indeed, as we now all acknowledge, wonderfully accurate, they were received with distrust. Of this discreditable feeling we see an instance in the following

passage by no less a person than Professor Merkel, of Leipzig, which in the present state of our information it is impossible to read without a smile :—"I have not yet, it is true, been able to obtain Garcia's original "observations and do not know, therefore, how he proceeded in these "alleged experiments, what he has seen and what he has not seen ; "but I have just grounds to doubt the reality of his observations until I "am informed in what manner Garcia has prevented the mirror from "becoming dimmed, and how he draws forward the epiglottis, which to "a great extent hides the glottis from the eye, even though it be by means "of the mirror placed near the uvula," etc."

Even after Czermak had, in the course of his tour throughout Europe in 1859-60, demonstrated to conviction the groundlessness of the prejudice against the laryngoscope and the ease of its general employment, the mirror was denominated by the *Medical Times and Gazette* "a physiological toy of no manner of use in the treatment of disease," while the idea of a hospital where its daily employment would be made a special feature was ridiculed as the acme of quackery. How different are things now. In 1865 less than 3000 represented the whole number of patients of the City of London treated with the aid of the laryngoscope, and there was but one institution where it was used ; to-day, on a moderate computation, there are close on 30,000 patients, of whom at least half are treated in special throat hospitals, and there is hardly a general hospital to which a medical school is attached that does not boast a special department for diseases of the throat, though it cannot be denied that while at a few of these the work is done excellently,² at several, advertisement of the existence of this and other special clinical features is even still only in the nature of an educational sop to the parental Cerberus.

Two instances illustrative of this last contention occur to me in relation to the special throat and ear departments of two hospitals, which were the earliest to establish them. At one a man was admitted with syphilitic laryngitis ; tracheotomy was performed, the tube removed after ten weeks, and the patient discharged without a single laryngoscopic examination being made either before or after the operation ; at a later date and in a special hospital, the mirror revealing cicatricial stenosis of serious degree, the tube had to be re-inserted and retained for life. At another, the departments were in charge of a young general assistant-surgeon, who frankly told me that if he was on house duty he could not bother to brush a relaxed uvula or syringe an ear when a good case of hernia or fracture claimed his attention, the minor diseases presented by such operations appearing to embrace for him the limits of interest in the specialties.

As I boldly stated two or three years ago at a debate raised

¹ "Anthropophonik," Leipzig, 1857, p. 608.

² In an interesting address on the future of laryngology delivered at Leeds in 1889, Mr. Butlin stated that when a special department for diseases of the larynx was started at St. Bartholomew's in January, 1881, "there were only two or three lamps, scarcely any students in attendance, and there were no regular dressers. The number of dressers has been regularly increasing and at the present time," he says. "I pass more than fifty men through a three months' course of dressing every year. The number of days on which the patients are seen is two, in place of one each week ; the number of lamps is nine in place of two."

against special hospitals by the Hospitals Association, there is hardly a laryngologist in charge of a throat department of a general hospital who is not indebted directly to the Throat Hospital for the education which entitled him to that post, and my personal obligation to that institution for the benefits I received in the course of an apprenticeship of seven years will, I trust, never be forgotten by me. The Central London Throat and Ear Hospital, which has been established nearly eighteen years, can make no claim to education of metropolitan specialists, but we have had a goodly number of pupils now doing excellent work in the Provinces and the Colonies, and the United States. Many of the "dressers" from special departments come to us when qualified to practice as clinical assistants, and the applications for such appointments are now in excess of the vacancies. Facts such as these, and they could be easily multiplied, should be sufficient to silence all objectors, and I would fain pass on to matter less polemical were it not that our detractors have entirely shifted their ground, and now declare that special departments being so general, there is no longer occasion for special hospitals, notwithstanding the existence of overwhelming evidence to prove that had not the latter been established, the benefits of the former would even yet be in the womb of futurity. Moreover, we still hear the cry that local treatment is abused and that the ignoring of general constitutional causes and of general treatment of throat diseases is an essential of the laryngologist who is attached to a special hospital, though we rarely or ever hear it said of the general surgeon boasting of a special department. I doubt if this charge were ever justifiable; certainly it was not in the generality of its application to all throat specialists, nor to the invidious selection of this particular section of them.

It would not be difficult, as Dr. Weir Mitchell has recently remarked, to show that much more frequently the fault is with the generalist who ignoring or misinterpreting the original and possibly local source of a symptom, wrongly and ineffectively treats the patient by drugs for something which is easily recognized and promptly curable by the surgeon specialist.

One of the latest fads of the general physician is to ascribe impairment of the senses of sight, hearing and smell, of speech, and for all I know, most other disorders of function, to neurasthenia, and to assert that numbers of these cases get well without treatment. But I think I shall be in agreement with most of my hearers when I contend that no one is in a position to make such sweeping statements unless he is an expert in the respective technical methods of examination, and has exhausted every special means of diagnosis. Needless to say that this neurasthenic theory is one of great comfort to the ill-informed, and constitutes a readily wielded weapon against the specialist, but in truth it only represents in more pretentious form the advice of past times that children would "grow out" of enlarged tonsils, or that a suppurative discharge of the ear should not be "interfered" with.

But admitting for the sake of argument, to still quote this same eminent American physician, "that limitation of attention to par-

"ticular organs is apt to lead to a too entire trust in local means, "and to neglect of those patient methods which ought more frequently "to call for the added counsel of the general physician," I would claim that such a charge could with more force of directness—though probably with no more fairness—be urged against either the ophthalmist or the aurist, each of whom is often enabled to treat errors of refraction or audition by purely mechanical and local measures. But the cases of disease of the throat that can be so regarded are comparatively few, and I have ever urged this fact in my writings and my daily clinical teachings. Mr. Butlin, in the address already alluded to, has well said that "from the point of view of its importance to the "general public, laryngology stands second to none of the specialties, "gynæcology alone excepted, while it is far superior in importance to "some," against which, I would add, much less objection has been taken. The reason of this importance of laryngology to the general public is, of course, because of its far-reaching influence on the general health—a point that does not require much further insistence at this date nor before my present audience. Suffice it to say that, whereas the ophthalmoscope is chiefly of use beyond its local sphere, in detection of cerebral and renal disease, there is hardly a general disease on which light may not be thrown by an intelligent application of the laryngoscope, nor is there a single specialty whose diagnostic and therapeutic utility may not be aided by our investigations. Amongst the latest and still largely unrecognized examples of this fact are the many diseases of the eye which may be relieved by means of treatment of causative conditions existing in the throat or nose. Above all, there is no technical instrument amongst the whole armamentaria of the surgeon which, having accurately detected the site and nature of a local disease, is so useful, and indeed so essential, to effective treatment; and, finally, I challenge contradiction of the statement that all the best work in laryngology, as in all other special branches, has been done, not by the generalist who flirts with it, but by the specialist who, being well grounded in general principles, devotes his whole life to it.

A good idea of the advances made in laryngology may be gained by comparing (as I have been recently privileged to do) the earlier medical reports of the Throat Hospital with those of later date. During the first six years the special claims of the hospital were urged by the printing of a list of about twenty diseases, which included all the faucial, pharyngeal, post-nasal, laryngeal, œsophageal, and external maladies of the throat that presented themselves. This list was in 1869 extended to forty, but it was not until 1875 that a thorough attempt at registration was made. The diseases were then tabulated under ten heads, with a sub-table for each region—namely, the pharynx, larynx, trachea, nares, mouth, tongue, œsophagus, neck, chest, and ear, and the total varieties in the sub-tables numbered about seventy. The classification of the Central Throat and Ear Hospital is in the main similar, though our list of separate diseases is more extended, because we classify with more detail diseases affecting the ear, of which we treat a much larger number.

Some other very curious facts illustrating the advance of our science

are to be deduced from comparisons of the tables of these two hospitals for the last seven years, which have each been privileged to treat in that period about an equal number of patients—45,000.

These figures pertain to the out-patients only, because, while the in-patients may vary in number, it may be taken for granted that this latter class have, previous to admission to the wards, attended in the out-patient department.

First amongst these facts is the evidence of the more careful recognition of the importance of disease of the nares as a primary factor in the causation of diseases of the larynx. Thus, at Golden Square, in 1884, diseases of the nares numbered 212 out of a total of 5701 patients, and in 1891, 760 out of a total of 6855 patients—representing a percentage of 3.73, and 11.1 respectively. In 1889, indeed, the number was as high as 986 out of 6516, or over 15 per cent.

At the Central Hospital, the evolutionary changes in this direction are even more remarkable, for from 105 cases of diseases of the nasal fossæ in 1884, out of a total of 5014 patients, we have noted 1834 out of 6675 in 1891. In other words, recognition of diseases of the nasal fossæ—and these, be it remarked, not including adenoid growths or other affections of the naso-pharynx—has risen from a ratio of 2.09 per cent. in 1874 to 27.47 per cent. in 1891. I do not think I am called upon to defend the difference in these figures, perhaps not even to explain it, though speaking for myself, and I believe I might say for my colleagues, since I have now under my personal care but one-sixth of all the cases annually treated, I can ascribe the change mainly to the enthusiasm aroused in our staff by the visit and brilliant demonstrations at our hospital of Holbrook Curtis, of New York, in 1887, and later, to the teachings of Bosworth as set forth in his classical work. As to the first, while we had but one case of deviation of the nasal septum submitted to operation in 1886, we had 17 in 1887 (the year of Curtis's visit), 104 in 1888, and 214 in 1891. It is somewhat curious to observe that, at Golden Square, at least so far as the practice is revealed in the statistical tables, deviations of the septum are almost ignored, for while I find 6 recorded in 1885, and 18 in 1886, they are altogether conspicuously absent in the tables of the out-patients for the following three years, and but 16 were treated in the wards in 1890 out of a total of 519 in-patients, against 23 at the Central out of 228 in-patients.

Again, after the publication of Bosworth's volume in which he regards chronic laryngitis, tracheitis, and bronchitis, "as almost invariably secondary affections to disease of the nasal passages,"¹ we began to observe the nose more carefully, and in the main truth of Bosworth's conclusions we have been able to concur, even though we have been obliged to discount to some extent this and other of his statements by an allowance for the personal equation of his high enthusiasm. As further instance, both of the acuteness of the observation and of the necessity for somewhat qualifying its dogmatism, take Bosworth's opinion that a deformity of the nasal septum, giving rise to nasal stenosis, is "by far

¹ "Diseases of the Nose and Naso-Pharynx," New York, 1889

the most frequent cause of hypertrophic rhinitis." Indeed, he told us at Birmingham and Berlin in 1890, that he believes a septal spur or deviation to be an *invariable* accompaniment of this disease.

During the year 1890 it was agreed with my colleagues that the record of every case of hypertrophic rhinitis should be notified on this point, and we found that out of a total of 1133 cases of sub-acute and chronic hypertrophic rhinitis a spur or deviation of what might be called surgical importance was present in 988 cases, or 87·2 per cent., and in only 145, or 12·7 per cent., was it absent. Of the general correctness of Bosworth's views a further corroboration is given in the circumstance that since their recognition the majority of acute, sub-acute, and chronic laryngeal diseases are only to be treated satisfactorily, and may often be treated solely, by direction of our therapeutics to the primarily offending region of the nose.

I am well aware that there were other workers of great originality in nasal diseases before Bosworth, of whom we cannot forget Voltolini, of Breslau, whom we had the honour to number amongst our honorary Fellows, and Hack, of Freiburg, but I contend that no one has done more to give practical effect to the importance of diseases of the nose, as causative factors of those in the throat, larynx, and respiratory organs generally, than our American *confrère*, to whose researches I have at some length referred. For think how barren was our knowledge, how tedious was our former treatment, and how merely temporary our alleviations of inflammations and functional and reflex neuroses of the upper respiratory passages until this interpretation was offered to us! Nevertheless, rhinology, being the most recent departure, has at this moment the honour of being the best abused speciality.

I was speaking just now of the "personal equation" in all observers possessed of enthusiasm. I observe 58 cases of "ethmoiditis necrotica" in the report of the Throat Hospital for 1886. With a change of staff this disease disappears from the nosology of that institution, nor is it to be found at the Central. But at this last-named hospital, where I work, varix of the throat and lymphoid hypertrophy at the base of the tongue—a condition whose importance I was, I believe, the first to urge—was noted only 31 times in the report for 1885, but 369 in that for 1891, my colleagues agreeing with me in considering it a pathological entity worthy of treatment. It is absent altogether from the tables of Golden Square. This last circumstance has been inserted as an antithetic parenthesis, but, independently of that, I have so far alluded only to diseases of the nasal fossæ. These act injuriously—first, by causing nasal stenosis and enforced mouth-breathings; secondly, by departures from the normal consistence and quantity of the nasal secretion, and, thirdly, by a consequent catarrh of the naso-pharyngeal and laryngeal passages.

We have, further, to remember how much greater importance is given now than formerly to the circumstance that a very considerable number of diseases of the upper air-passages, especially those of children, depend on mouth-breathing due to the presence of adenoids. Although it is upwards of fifteen years since William Meyer, of Copenhagen, brought this

subject under our notice, and illustrated its importance by the relation of over 100 cases in his own practice, it has not received its fair share of attention until the last ten, or even, I might say, the last seven or eight, years. Thus at the Throat Hospital in Golden Square the percentage of adenoids in 1885 to all cases admitted was 0·7 per cent.; it rose in 1891 to 2·75 per cent. To these figures should probably be added a considerable proportion of the cases of enlarged tonsils in which adenoids co-existed, for experience of the last few years assures me that, while there may frequently be enlargement of the pharyngeal tonsil constituting adenoids without hypertrophy of the faucial tonsils, it is but rarely that this last condition is found in children without corresponding adenoid overgrowth. At my own hospital, where possibly we are more surgical, our tables show a much more startling increase, the numbers in 1884 representing a percentage on all cases admitted of 0·44 per cent., and in 1889 of over 5 per cent. Since that year we have tabulated adenoid hypertrophy as a separate disease, whether it existed in association with ordinary tonsillar hypertrophy or not, and the numbers in our report for 1891 give 621 cases of adenoids out of a total of 6675, an average of over 9 per cent. Of the far-reaching influence of this condition much interesting evidence has been afforded. One of our Fellows, Dr. Farquhar Matherson, has pointed out the etiological relation of adenoids to stammering, and of the correctness of his views I have no doubt; not that I have been able to satisfy myself that mere removal of the adenoids without after-education will of itself cure the stammering, but, on the other hand, I have seen many cases in which education was fruitless until these physical obstructions to a correct action of the muscles of articulation had been recognized and eradicated. I have myself been able to adduce two cases illustrative of the importance of adenoids as a possible predisponent to the actual formation of laryngeal papillomata in children, or at least of their recurrence. I have also convinced myself of the relation of these glandular hypertrophies to laryngismus stridulus, a proposition disputed when I first enunciated it, but since confirmed by my friend, Dr. Kendal Franks, another Fellow of our Association, and by other independent observers.

Fain would I occupy myself, did I not fear to weary you, with other interesting examples of our progress, but I must limit my remarks and your patience to the consideration of only two or three other points. Chief amongst these would I note the great aid laryngology has been to general medicine in its power, first to observe with the eye the earliest stages of tuberculosis of the respiratory organs, and, secondly, in the encouragement given by the successful attempts to heal tuberculous ulcers of Heryng of Warsaw, Krause of Berlin, and Gouguenheim of Paris. These results are of importance, not only to laryngologists, but to all who have to treat tubercle wherever situated. The cure of a case which I exhibited at the Medical Society five years ago, of pharyngeal and laryngeal tuberculous ulceration by scraping and application of lactic acid was an encouragement to a friend to try the same treatment in a patient suffering from a similar condition in the rectum. The beneficial effect of menthol in tuberculosis of the larynx has led to its successful application to the more

remote trachea and bronchi. This drug, as also cocaine and codeia locally applied, has largely diminished the terrific agony and torture so characteristic of this distressing disease. Fully twenty years ago, I was meeting Dr. Walsho in a case of laryngeal phthisis, and making mention of one or two drugs employed in those days as local anodynes, that distinguished physician remarked that if the topical treatment could really achieve what I then ventured to claim for it, it would do more than anything else to justify the position taken by throat specialists. I would not mention this conversation without asking permission of Dr. Walshe, who in reply to my request has kindly written to me under date of November 14th, 1891:—

“I have always thought and often given expression to the thought, that among the therapeutical achievements most to be desired in the range of respiratory disease ranks the removal, or even the notable alleviation, of the pain and other tortures attending ‘laryngeal phthisis.’ I can, therefore, have no doubt that I may have used the *ipsissima verba*, which your excellent memory serves to recall after a lapse of twenty years.”

I have not time to allude at length to the many important and radical changes which the investigating apparatus and therapeutics, both medical and manipulative, of throat diseases have undergone in the last twenty-five years. Some of them have been already hinted at; but I might be misunderstood if, in speaking of tuberculosis, I omitted all mention of its treatment by tuberculin. It is now the fashion to condemn this product as altogether worthless, and to ridicule the enthusiasm of those who took a pilgrimage in 1890 to Berlin, in order to witness the new treatment as pursued with the unanimous approval of the many eminent physicians and surgeons of that great medical centre. For myself I shall never feel ashamed that I was one of the pilgrims, and, at least, I was in distinguished company; nor will I be so uncharitable as to retort too severely on those who, then lacking and now condemning the enthusiasm to study the subject on the spot, were not above supplicating us to obtain for them a few drops of the magical fluid.

The more careful study of tuberculosis and its relations to lupus and leprosy, which the movement stimulated, might of itself atone largely for the disappointment of promises of as easily attained a cure as (the wish being father to the thought) was too readily assumed, and the reaction—to employ an appropriate word—against the treatment and its great promoter, is to the full as unreasonable. In common with almost every other practitioner who has had any experience of tuberculin, I may say that while I have had to record a most discouraging list of failures of the remedy to give more than symptomatic and very temporary relief, I am happy to report one case of cure, by its means, of true tuberculosis, the diagnosis of which was established by the presence of tubercle bacilli in the sputum, and the physical examination of Dr. Dawson Williams in this country, and of Professor Gerhardt and his accomplished assistants in Berlin. Added to this I can report at least one case of cure of lupus, and many instances of the diagnostic value of the fluid. The chemical researches of Dr. Hunter and other English workers, and the industrious perseverance in their clinical application by Mr. Watson Cheyne, lead us to hope that out of evil may yet come good, and that even if Koch be

not awarded the full glory of achievement, at least to him will redound the honour of initial discovery.

There is another important respect in which laryngology, in common with, and possibly in no greater degree than, other specialities, has been advanced in usefulness in the last few years, namely in the more accurate and expeditious use of the microscope. When I first commenced practice I, in the haste and irreverence of youth, used to say that by the time a specimen was in a condition to be sectionized, and the various members of a microscopical committee had agreed on a report, the patient was either dead or cured. But all this is changed, and we can now learn the characteristics of a sputum or the nature of a growth almost before the patient leaves our consulting room, or is removed from the operating table. I have not the least doubt that the emulation of young histologists in this direction was largely stimulated by the exhortation of Sir James Paget some five years ago, that it should be the rule to examine such morbid growth or product, not only after it has been prepared by repeated staining or other like process, but also "*directly after its removal from the living body, while it may be deemed still alive.*"

To quote two striking instances in my own practice, I had recently the honour of reading a case to you of a laryngeal growth, which, to the naked eye, would be considered a typical papilloma, but, on minute examination by Mr. Wingrave, proved to be an angioma. It is possible, and even probable, that, without unduly straining the lesson to be learned from a single example, the rupture of a varicose or distended vessel in a hyperæmic vocal cord may be the original source of local irritation and consequent development of a warty growth in more cases than has hitherto been suspected; but this would be difficult of proof, except where, as in my case, the whole neoplasm was removed intact.

Recently, again, I was enabled, as the result of an examination of a specimen of hæmorrhagic sputum, to confirm definitely the diagnosis of a gumma pressing on the right bronchus, near the bifurcation, and this in spite of several symptoms which might have pointed to the existence of a pulmonary lesion, a malignant growth, or an aneurism. Later examinations very prettily corroborated the subjective evidences of improvement. We must not, however, assume that we have yet by any means arrived at a stage of histological perfection. A case, familiar to many of us in London, constantly occurs to my mind, where the history subsequent to a partial laryngectomy has most happily belied the inevitable prognosis, as foreshadowed by the histological report of the removed growth. And yet again, there is the excellent case related by our Secretary, Mr. Stoker, in which, I am sure, he will agree with me, the clinical history of a laryngeal growth hardly prepared him to anticipate the malignant character of its structure, as determined by irrefragable microscopic examination after endo-laryngeal removal. In both these instances the whole of the morbid structure was at the command of the observers, and there could therefore, be no fallacy on account of insufficient material or incomplete data, but I need hardly remind you that in ours, as in every branch of surgery, the histological evidence of a fragment, useful as it often is, may sometimes lead to an erroneous diagnosis, with a consequently faulty prognosis.

Bacteriology, like its elder science sister histology, has been invaluable to us, and, in its bounteously productive youth, gives promise of still richer harvests. This section of bacteriology, in its application to general medicine, was one of the most attractive at the International Medical Congress, at Berlin, of 1890, and absolutely took the palm of interest at the Hygienic Congress held in this city last August. Nor can any of us forget the brilliant demonstration of the science in relation to the diseases of our specialty given us in the past session by our much esteemed colleague, Dr. Macintyre. Suffice it here to mention its superlative importance in doubtful cases of phthisis, and the discovery—each day receiving fuller confirmation—of a bacillus of diphtheria, in addition to those already recognized of lupus, leprosy, and ozæna.

Having offered you a few of the more pregnant thoughts suggested by my memories of the past, and also, as I hope, shown you by the light of those memories that laryngology is a science improving with its growth, I would venture to enforce the moral of this retrospect by quoting the eloquent words of Sir James Paget, delivered on a similar occasion.¹ "Let us never be content with present utility. Glad of it we may well be, and even proud, for science cannot be degraded by being useful in good things . . . but we must not be content with it as it is; it will be increased by every increase of our real knowledge . . . which brings before us a larger and clearer view of the immeasurable quantity which is still to be gained. The more we know the more we can see, if we will, how much more there is that we do not know . . . Where, then, are we to stop? I do not know more than this—that we must not stop where we are; we must go on and on, and we may be sure that they who work to find the truth will not work in vain—sure that with true work true good will come." Thanking you, gentlemen, for your patient forbearance, I will, with our great surgeon orator, hope that it may be so in this Association during my presidency.

Dr. WARDEN proposed a vote of thanks to their President for his admirable address. He said there could be no doubt at present as to the success of the laryngoscope, and he avowed himself one of those who believed that the greatest amount of good came from specialism in each department. It had been the fashion to ignore and ridicule all specialism, but he thought that at present the profession were getting more and more fully aware that the specialist was the pioneer of science in his department.

This was seconded by Dr. SANDFORD, and agreed to by acclamation.

Discussion on *Deflections of the Nasal Septum* was opened by Mr. MAYO COLLIER, who said:—

Mr. President and Gentlemen,—Last time I had the honour of bringing a communication before this Society it was on the subject of the tonsils. You were then good enough to intimate your approval. The only fault, sir, that you found was that my remarks were too few—a fault, I feel sure, I shall not commit on this occasion, if indeed I do not overstep the bounds and sin in the opposite direction.

¹ "The Future of Pathology." 1883, vol. 1, p. 144.

Emboldened, then, by your generous approval I have again dared to appear before you.

Since then I have not gone backwards—on the contrary, I have progressed—my thoughts have soared in higher regions, and, being ever-mindful of the proverb, "*Medio tutissimus ibis*," I have selected the nasal septum as the subject of my communication to-day.

Now for a definition.

By deflections of the nasal septum I mean all bulgings of the inner party wall of the nasal fossæ having corresponding concavities on the opposite side.

By this definition, you see, I exclude all ridges, spurs, exostoses *et omne hoc genus*, although they are incidentally alluded to, and I think their presence satisfactorily explained, in the course of my remarks.

It is the custom of logicians, and indeed with them is a hard and fast rule, amounting to a law, a law as unalterable and as stringent in its application as the far-famed laws of the Medes and Persians, that, whenever an investigation is put on foot to inquire into the cause or causes of any effect, to at the onset supplement the main question, or, as I would prefer to say, subdivide the main question into two primary ones.

These are technically known as and termed the An Sit and Cur Sit.

Now, sir, the An Sit, or "Is it so?" or, more literally translated, "Is it a fact that so and so, as reported, is so?" must always precede the Cur Sit, or "Why is it so?" because if we cannot prove the An Sit the investigation of the Cur Sit falls to the ground.

Proceeding, then, on strictly logical principles, I propose to deal with my subject, namely, "The Causation of Deflections of the Nasal Septum," by asking myself, firstly, the question—An Sit, *is it a fact* that nasal deflections exist to a sufficient extent to make it worth while for us to devote our serious attention to investigate the causes of their existence? or, in other words, do they amount to a sufficient number to constitute a normal abnormality?

Well, gentlemen, anticipating what I shall most indisputably prove later on, this An Sit can be answered in the affirmative, and I shall show and conclusively prove that some deflection of the nasal septum is nearly as common as a nasal septum.

Secondly, we come to the Cur Sit, or "Why is it so?" and we immediately see that the Cur Sit becomes of importance only and just in proportion as we are able to establish the generality of the An Sit; or, in other words, the indisputable and almost general existence of the fact. Sir, I am a thought-reader, and can read what is now passing in your minds. It is this: What on earth has all this got to do with the subject? Who does not know that deflections of the septum are as common as blackberries? Why cannot he get on with his subject?

My answer is, Wait a bit; don't be impatient. I say you must always establish your An Sit; aye, and re-establish it on every occasion before you can argue your Cur Sit. More than this, I say that everyone does not know or does not recognize how frequent are deflections of the septum, and, consequently, do not recognize their consequences. Works on general medicine and surgery ignore the fact, and it behoves us, as

the pioneers and guardians of this particular department of medicine, to make assurance doubly sure, and to advertise the fact on every possible occasion.

Now sir, as this is the first time since the foundation of this Society that the subject of the nose and its diseases has come before you, I take this opportunity, and it appears to me a very proper proceeding, and I trust it recommends itself to you also, to say a few words on introducing this subject. It cannot be unknown to you, after what has fallen from the President in his eloquent address, even if you were ignorant on this subject before, that the nose and those who practice its diseases are not, if I may say so, in good odour with the general body of the profession. I am a general surgeon, attached to a general hospital, but taking a very great interest in this department of surgery, pardon me if I am a little jealous of its honour. I would suggest to you that it is your duty to listen and note what is said. It is our duty, as the British Laryngological and Rhinological Association, to alter this if we can. Why, you banded yourselves just four years ago into this Association, and what for? To advance the science of laryngology and rhinology, and by implication to protect and uphold the good name and calling not only of the Associates, but of all those who practice these diseases. In the face of this, are you aware that there be those in the ranks of our profession, aye, and in the tents also, and their number, I regret to say, is not a few, who intimate, if they do not say so in as many words, that nose specialists are nothing better than charlatans, quacks, and rogues; that they foster, nurture, and keep in darkness the nose and its diseases, as they would the goose that laid them golden eggs; and, moreover, if anything more be wanting to complete this pretty picture, that they live, thrive, and grow fat upon the credulity and ignorance of their fellow creatures.

I say to you in the words of the Scripture, "Blame them not, for they know not what they say," but rather educate them, educate them with fact not fancies, feed their minds with the result of your honest work, proved and reproved, not self-contained assertions, self-contained in the sense that they bear the stamp or *ipse dixit* alone of some individual who may happen to make a good thing out of tinkering at and tampering with the nose.

I say do this and they will soon be converted, and will turn round and bless, respect, and honour you.

Apropos of the necessity of catching your hare before you can cook it, or establishing your An Sit first on every occasion, a story is told in connection with a body of men whom you will be inclined to agree with me, are not the least intelligent of our fellow creatures. I allude to the Fellows of the Royal Society.

The question under discussion was the reason why a globe of water with a live fish in it weighed less than the same globe of water without the fish.

Some said they would give it up and playfully requested to be asked another, but there were others who rather fancied themselves and set to work and wrote papers in explanation of the fact.

One explanation that particularly "fetched" the Society, was that the

fish yielding to his characteristic propensities, drank a great deal of the water, condensed the same in his tissues, and then on being withdrawn from the public gaze—as you would say—made water.

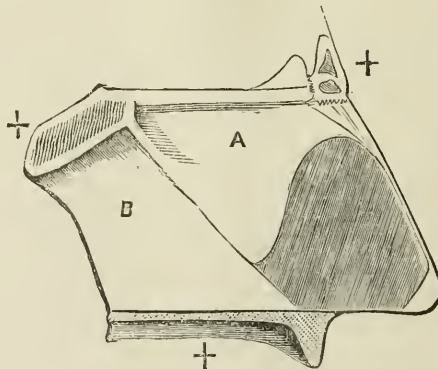
Well sir, the President, who even on that occasion was no less a personage than a king; King James the First, I believe, had his royal doubts on the subject, and on the matter being put to the proof by a pair of scales, lo! and behold it was not so. These worthy gentlemen had been talking nonsense. They had put the cart before the horse.

Now, gentlemen, it was in order to save you the infliction of sitting there and listening to more than the ordinary amount of nonsense that I was careful to put my horse before my cart, and, whenever I do start, to place something before you with some little “go” in it.

You will see by the synopsis that I next propose to deal with the anatomy of the septum, cartilages, and muscles of the nose. In doing so I wish to direct your attention to several well-known but unrecognized facts, and to divest you of several current but erroneous notions. In the first place the septum nasi is not a firm, stiff and solid partition between the nasal cavities limited by a fixed and immovable framework of bone. On the contrary, the septum is an extremely thin translucent elastic partition not designed to give support to the bones of the face and skull, but to act as a delicate support for mucous membrane and important structures contained therein.

I would remind you that the septum nasi is frequently entirely absent without producing any serious consequences to the shape of the face or head, and, moreover, may be destroyed in part, or to a considerable extent, by disease, without even altering the external appearance of the nose.

The septum is not fixed in an immovable framework of bone, it is supported at three points only, and in the rest of its extent it is practically free.



Septum of the Nose.
A. Ethmoid; B. Vomer.

You will see from this, and other peculiarities that I shall immediately point out, how easily a force acting in a direction at right angles to the septum can bulge a partition so thin, so unsupported, and so naturally

prone to displacements. On glancing at the diagram you will see that the septum is an irregular hexagon, but for all practical purposes may be considered as a quadrilateral, and, further, taking an average of a great number, may be measured as a square whose sides are three inches long, giving a superficial area of nine square inches.

The importance of this measurement will become apparent presently.

The septum is composed practically of two bones and one cartilage—the vomer perpendicular plate of the ethmoid, and the triangular cartilage of the nose.

Now in reference to each of these factors we find that the relative proportions are subject to variations. The perpendicular plate of the ethmoid may be very thin, especially posteriorly, and may not extend further forwards than the frontal spine, or on the contrary may be thick especially anteriorly, and end in front in a regular prow. The variations in the vomer chiefly affect its anterior half, the inclination of its posterior border, and its forward attachment to the superior maxillary bone.

The posterior border may be almost vertical or inclined at an angle of 45°. Moreover, it is frequently deeply grooved, indicating its development from two distinct plates. The anterior half is frequently cancellous, extremely thin, and often presents a separation between its two plates. It may extend as far forwards as the anterior nasal spine, or fall short of this by an inch.

The triangular cartilage is also the subject of frequent variations. It is usually very thin and quite translucent in the centre, and here sometimes deficient also. It is much thicker at its margins than at its centre. Its anterior margin is thickest above where it fits into the groove of the nasal bones. Its superior posterior border fits into the groove on the anterior border of the perpendicular plate of the ethmoid bone.

Its inferior border is thin posteriorly where it fits into the groove formed by the separation of the plates of the vomer, but is thicker in front where it articulates with the crest of the superior maxillary bone and joins the column of the nose. Its chief variations affect its extent forwards and upwards, and its degree of attachment to the superior maxillary bone.

Taking the septum as a whole, it is most important for our purposes to note that it is the anterior and central segment that is the thinnest, and to recognize how extremely thin this part is in the normal state. The posterior and upper part of the septum maintains a fairly uniform degree of consistency.

Now, please note it is exactly where the septum is thinnest that deflections are, and where it is thickest that deflections are not. No man, woman, or child ever saw a deflection of the posterior half of the vomer. Next, ossification in the plates of the vomer and ethmoid commences very early, a single centre appearing about the third month for the ethmoid and two for the vomer.

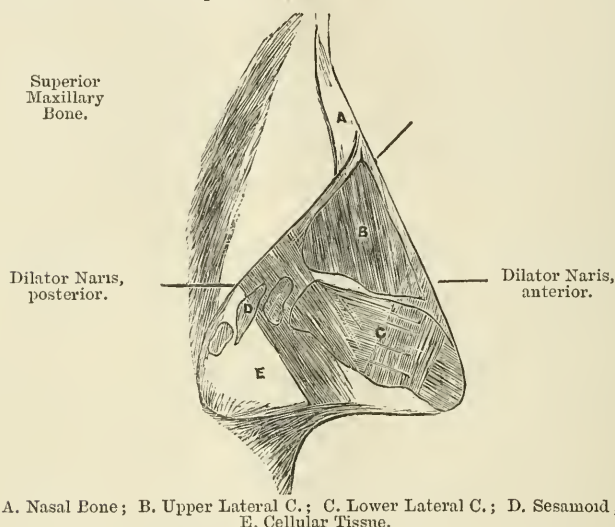
At birth, cartilage still exists between the two plates of the vomer, and between the anterior border of the vomer and ethmoid; indeed, it is recorded that cartilage, even in adult life, may exist between the vomer and ethmoid as well as between the plates of the vomer.

The most common variation of the septum as a whole is its more or

less complete absence ; most frequently, however, portions of the vomer, ethmoid and cartilage are present.

The only other variation I have been able to find is one recorded by Leffers, in the *Philadelphia Medical News* of Jan. 7th, 1882, and quoted by Sir Morell Mackenzie. Here the septum was partly duplicated, and in the author's exact words : "The upper half of the posterior edge of the "partition was divided into two distinct portions, large enough to admit "a lead pencil." Of course this was due to arrest of development, or non-union of the separate halves of the vomer.

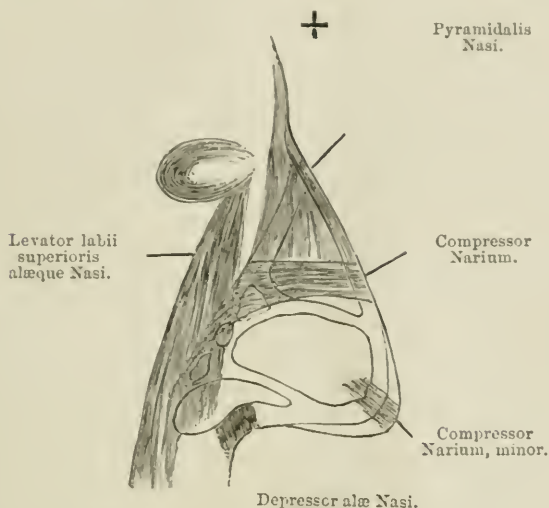
We pass now to not the least important part of our subject, namely, the cartilages and muscles of the nose. Now, I am going to make this to you extraordinary statement, and, moreover, I am prepared to prove that to paralysis or paresis of these muscles an enormous number of deflections of the nasal septum are due.



As you will see by the diagram, the nostril is a valve which, without living structures to regulate and preside over the opening, would admit the passage of air only in one direction, namely, in expiration. Proof of this is afforded in deep chloroform or other narcosis, some cases of hemiplegia, lesions of the facial nerves, and other states. The cartilages of the nose are so arranged as to afford rigidity with elasticity, and are disposed in the manner indicated as illustrated on the diagram. They are the upper lateral, the lower lateral, and sesamoid cartilages, the remaining portions of the alæ of the nose consisting of fat and fibrous tissue.

These cartilages are acted upon and regulated by a double set of muscles, comparable to the intercostal muscles in so far as they run between cartilage and bone, are connected with the respiratory function, and are brought into play separately according as inspiration or expiration is dominant.

These muscles are seven in number, and are divided into two sets—the dilators and constrictors; and the dilators again into ordinary and extraordinary. The ordinary dilators are the dilator naris posterior and the dilator naris anterior. The reserve or extraordinary muscles are the



pyramidalis nasi and levator labii superioris alæque nasi, no insignificant or feeble structures. The compressors or constrictors are feebly represented by the compressor nasi, and the compressor narium minor and depressor alæ nasi. The actions of these muscles are indicated by their names, but it would be as well to observe how great is the difference in the power of the muscles that open or dilate the valve to those that close it.

Now, sir, for statistics in proof of the An Sit. Some years ago, when first reading this subject, I recognized, as others have done, that statistics as to the number or proportions of deflections in the dried state were really of not so much value, in view of the fact that nine out of every ten deflections affected the cartilage of the septum and the portions of bone in its immediate neighbourhood.

I then set to work to examine every person who presented himself at my out-patient practice at the Hospital, as well as those in private practice that I decently could, in order to find a perfectly normal septum, with much the same result that Solomon had when trying to find a truthful man.

I am enabled to make this general statement after examining over 1000 living septa, to say that some deflection or other irregularity of the septum is within 10 per cent. a constant feature of adult life, and it is only in young persons under puberty where we may expect to find a majority of normal septa.

First and foremost, always *facile princeps*, come the observations of our much respected late president, Sir Morell Mackenzie. He examined

2152 dried skulls, and found 1657, or 76·9 per cent. had deflections or other irregularities in nearly equal proportions on both sides ; please note ! Also in nearly 10 per cent. deflections existed on both sides. Well, I need not trouble you with a long list of observations, amounting to another 2000 by various authorities in this country, America, and the Continent ; suffice it to say that their conclusions are in accordance with Sir Morell Mackenzie's, and warrant us in making this statement, that even in dried skulls there is evidence of some irregularity of the nasal septum in three people out of four. There is one qualification to this statement. This proportion does not hold good or apply to aborigines or uncivilized beings. Both Sir Morell Mackenzie and Zuckerkandl found that about 80 per cent. of aborigines' skulls were normal. I will read you what they say :—

“Superior races show greater disposition to this deformity, for in 103 non-European crania it was present in only 23·3 per cent.”

Sir Morell says : “From 438 symmetrical skulls, only 22·6 per cent. were from Europeans, the rest being Africans, aborigines of the American Continent, Polynesian Islands, Andaman Islands, the New Hebrides, New Guinea, Solomon Islands, and from the Island of Teneriffe.

H. Allen also examined 93 skulls of negroes, and found deflections or irregularities existed in only 21·5 per cent. I beg you to note carefully this point, as lending most powerful support to the contention I am about to place before you. So far, then, so good ; this is our answer to the An Sit and I defy the most sceptical to get over those figures, let him if he can.

Having disposed of the first part of our task, and answered it in the affirmative, and almost established a generality or a normal abnormality, we are now in a position—and only now—to search for the cause or causes of that effect. We are now coming to the kernel of our subject, and I trust and believe I shall be able to show you that we have not such a hard nut to crack after all.

You have before you a long list of causes, proximate or remote, each of which, with few exceptions, has at one time or another been advanced by men of great ability and repute and seriously contended. To-day, with the drag on the wheel of our imaginations, we shall examine them critically and in the light of common sense, and endeavour to sift the chaff from the wheat, and give honour where honour is due.

Now, sir, I cannot conceive any higher function for the human understanding than to be engaged in trying to unravel and find out the causes of things. All knowledge may be summed up in the word “causation.” *Vere Scire est per causas Scire.* I propose now to deal with the list in the order laid down in the synopsis ; and first with regard to hereditary causes, I am inclined to think they may play a very subordinate part, in so far as prominent or malformed nostrils may be a cause of obstruction to breathing. An hereditary tendency to colds, enlargements of the inferior turbinate bone, polypi, or new growths being transmitted may, when developed, block up and impede respiration, and so bulge the septum.

It would be better I think now, and you will be the better able to understand the gist or tendency of my remarks if I at once take you into my

confidence, and tell you what I think and believe, and am prepared to prove to your satisfaction is the chief and main and almost universal cause of deflections of the nasal septum. My contention is this: block up one nostril—say from paralysis or paresis of dilators of nose, injuries inflammations of cartilage, enlarged inferior turbinated bone, polypi, catarrh, or what not, and what is the result? Now the result will vary according as your subject is awake or asleep.

When awake he can co-ordinate so far that, by depressing and protruding his tongue, air can enter and equilibrate that in the lungs during inspiration, but not that in the closed nasal fossa; the rush of air passing out of the naso-pharynx through the open or partly open nasal fossa, will exhaust to some extent the closed nasal cavity. The very sprays you use in every-day life are illustrations of this fact.

The very wind blowing over the tops of your houses draws out and exhausts the air in your chimnies, and further exhausts and ventilates your dwellings. The simplest experiment, however, will convince the unbelievers.

If a bent piece of glass with mercury in the bend be connected by a rigid tube and inserted in the nostril, during every inspiration the mercury will fall in the one limb and rise in the other to the extent of perhaps an inch or more.

Now what is the value of this observation? Well, once more I say it is impossible for you to deny that if one nostril be blocked up from whatever cause, that the air in that nostril is rarefied by the inspiratory act, and if rarefied the walls of that box are subjected to a pressure exactly in proportion to the amount of rarefaction. For illustration let the rarefaction be equal to a fall of an inch in the column of mercury in the manometer. Well the total weight of the atmosphere equals about 29 inches of mercury at the sea level, and exerts a pressure of something like 15 pounds on every square inch. One inch of mercury will then be equal to a pressure of about half a pound on every square inch.

I pointed out that the average area of the septum was about 9 square inches, so that we see that a comparatively very large force of $4\frac{1}{2}$ pounds is exerting itself at every inspiration on the delicate thin septum, and this, with the mouth open, and the subject in full possession of his faculties.

Take the case of the subject during sleep; then respiration is slower, deeper, and more automatic co-ordination is lost, the tongue is no longer depressed and held forwards, but falls back in close opposition with the soft palate.

Oral respiration is effected by powerful inspiratory efforts lifting the soft palate every time, so increasing the rapidity of exhaustion of the naso-pharynx (by diminishing the width of the stream), and consequently materially increasing the exhaustion of the closed nasal cavity. It is not hard to deduce from this a pressure of two or even three pounds on every square inch of septum.

This combined long-continued pressure in a direction at right angles to the nasal septum can hardly fail to push in the thin inner wall of the nasal fossa at its weakest point.

Some of you will, no doubt, say, "Wait a moment, I have got you."

During expiration a plus pressure will exist in the closed cavity, and any harm done by exhaustion of the cavity will be undone by the expiratory effort.

I say, you have not got me, and a plus pressure will not exist in the closed cavity during expiration, and that for the following reasons. During inspiration the stream of air through the mouth and nostrils, meeting in the pharynx, passes into a gradually narrower channel, so that its flow becomes more and more constricted and rapid as it passes inwards, and consequently its power of suction or aspiration is greatest until it has passed the trachea to widen out again in the bronchi. Whereas during expiration every part yields to the pressure of the expiratory blast: the palate is lifted up, the pharynx expanded, the tongue protruded forwards, and the pressure and rapidity of flow rapidly and greatly diminishes, the air finding an exit where there is least opposition. Of course, the pressure is equilibrated by this in the closed cavity, but no more.

Well, gentlemen, that is my contention—namely, that the septum is subjected to a series of intermittent blows, varying in power from one to twenty pounds during every inspiratory effort, which cannot fail to push in the thin party wall of the closed nasal cavity if continued for a sufficient number of hours, or repeated sufficiently often.

Before dismissing hereditary causes, I would remind you of what Trendelenburg has pointed out, but ask you not to accept his conclusions. He has pointed out the frequent association of highly-arched palates with deflections of the nasal septum, and asks you to believe that the palate pushes up and deforms the septum.

Jarvis has reported a series of four cases in the same family, and asks you to believe they are hereditary.

I ask you to do nothing of the kind. I ask you to rather note that the same force that has pushed in one side of the box has pushed in the other. Now then, having established with almost mathematical accuracy, and I trust to your satisfaction, that obstruction to one or other nostril continued for any length of time is a fertile source, and almost universal cause of, deflections of the nasal septum, I do not do so to the exclusion of all other causes. We will now rapidly examine our list in detail, and I will point out those causes that I think operate with or apart from the *magna causa* obstruction.

(2) *Congenital Causes*.—I do not think that disease or injury affecting the infant in utero can be a very frequent or potent cause for damage to the septum. Observation and evidence is entirely against this assumption.

All the highest authorities say they have never seen a case. Zuckerkandl and Welker say that deflections are never found before the seventh or fourth year respectively. There is an almost complete consensus of opinion that they are never congenital.

Of course fractures in utero and displacements from great direct violence are possible and very occasional. One person only commits himself definitely on this subject. Mr. Spencer Watson says, "lateral displacements of congenital origin are not uncommon," but then Mr. Watson does not yet recognize that deflections of the septum are common

and consequently cannot be over burdened with knowledge on the subject.

(3) *Syphilis.* Trelat asserts that many cases are of syphilitic origin. Syphilis, I should say, can only claim to occupy a very secondary (no joke intended) position as a cause of deflections. In so far as its influence is to soften and ulcerate the septum, and block up the nose, I say yes, but no more. To syphilis I believe that spurs, ridges and exostoses are to some extent due.

(4) Rickets has been said by some—and notably by Loewenburg—to be answerable for a large number of deflections. A part may be assigned to some extent to rickets in the same way as to syphilis. By softening and delaying ossification, by the characteristic increased preparation for ossification and the subsequent delay in that process, exactly as we observe on the cranium and long bones; the ridges and spurs we so frequently meet with on the septum may be accounted for.

(5) Habitually blowing the nose with the same hand as mentioned by Sir Morell Mackenzie. With great respect, I fail to see how this can be accounted a cause. Could it be established as a practice it would fall under the heading of the all-sufficient cause blocking of one nostril, but in this case produced by the expiratory effort and not inspiration; but I would doubt the possibility of this as an agent on the score of the want of sufficient repetition.

(6) Habitually sleeping on one side as mentioned by the same authority, so as to block up the corresponding nostril, would undoubtedly lead to deflections of the nasal septum if long persisted in.

(7) Tendency to vertical overgrowth of septum, as suggested by Chaignon. In the absence of the smallest evidence of tendency, I decline to argue the point—the *An Sit* not being proven, the *Cur Sit non est*.

(8) "Primary laws of organization at fault," Sir Morell says, in reference to this. Cloquet hides his ignorance on the subject by impugning the primary laws of organization. May I add that when the primary laws of organization are at fault they would appear to affect men's minds, not their noses.

(9) *Action of Astringents.* This view was contended for and supported by both Quinquaud and Schultz. With great respect, I should be inclined to absolutely deny the possibility of astringents being remotely responsible for nasal deflections. Quite the reverse.

(10) *Habit of putting finger in nose.* Here again, *prima facie* possible, but absolutely limited as a cause in its application.

(11) *Overgrowth of a component part or parts of septum.* There is no evidence of the fact; but let the fact be granted for argument's sake, one fails to see how it can produce the desired result.

(12) *Traumatism.* I am inclined to agree with Bosworth that traumatism is by far and away the most potent cause in young people, next to catarrh and enlargements of the inferior turbinated bone, as a cause of nasal deflections.

But certainly, and most certainly do I utterly disagree and protest in the strongest terms possible at the bad example Bosworth sets, that

whilst examining into this subject he makes multitudes of assumptions and assertions, all absolutely devoid of proof, and then sets to and begins to build arguments upon them. His theory of early concussion of septum by injury, of which there is no history and consequent slow, gradual creeping inflammation, of which there is no evidence, leading to overgrowth and deflections of the nasal septum, is, in the phrascology of his own country, bunkum, and I shall not be very sorry if someone tells himso.

The possibility of severe direct violence affecting the septum in utero, we have not denied. That direct violence can cause displacement and fractures of the cartilages or bones of the septum, and also inflammations, leading to softening, and so to deflections, nobody in his senses will deny ; but that traumatism in that sense is a common cause of deflections I do deny, and what is more material to the point at issue, I say you have no evidence or proof to offer that it is so.

That traumatism in the sense of slight blows on the nose, the result of accidents or a pugnacious element in yourself or friends, is a most fertile source of deflections, it has been my endeavour to lead up to all along. Punches on the nose, blows, falls, not sufficient—in fighting parlance—to “tap your claret,” are all sufficient to bruise, injure, and annul for the time being, and aye for some considerable time to come, the power of the delicate muscles, whose function it is to preside over and keep open the nostril against the rush of the inspiratory effort.

(13) Injury to root, branch, or terminations of facial nerve, only in so far as it can affect the small dilators of the nose, and consequently in the sense of producing paralysis or weakness of these muscles can be reckoned as a cause of deflections.

(15) We will take next No. 15, as I can dispose of this in one breath. Swelling tumours, polypi, and new growths directly pushing over the septum are a self-evident cause of some deflections. Here cause and effect go hand in hand.

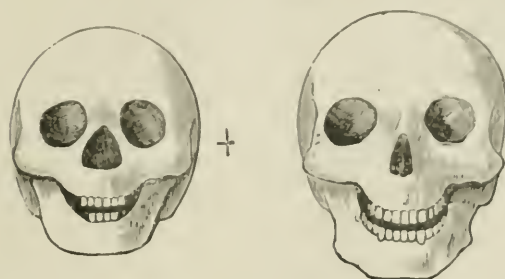
(14) Lastly, we come to obstructions of one nostril or obstruction in general—the grand, all-efficient, all-powerful, ever-present cause of deflections of the nasal septum. And here, as I have fully dealt with this at the commencement of my Causes, I shall take a survey of my, I am afraid, too lengthy remarks, and pick up and point out to you the salient features, and show you how marvellously everything concurs to support my contentions.

Firstly, the fragility and thinness of the septum, and the fact that deflections, as one would expect if my contention be right, always affect the thinnest portions.

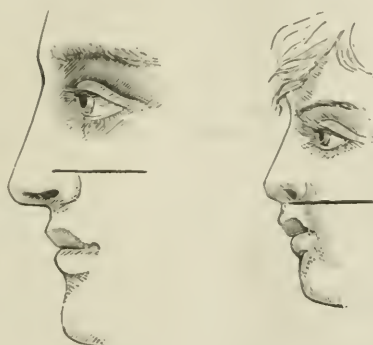
Secondly, out of the statistics we gather that deflections affect civilized beings, who are more prone to catarrhs and affections of the nose from cold and injuries. We learnt that 80 per cent. of savages and aborigines had normal septa ; beings, we may justly presume, who possess noses not so liable to disease and accident, or to such frequent blockings. Again, we learn that children before seven were not liable to deflections.

This is easily understood in the light of the anatomical fact that in infants and very young children the conformation of the nose and fossæ

is entirely different from that in adults. *Vide* diagram. Before seven to ten years the nose is always hood-shaped and slightly *retrousse*, the



anterior nares and nasal fossæ wider in proportion to the adult. As growth takes place, the face lengthens, the nose becomes longer, and the openings of the anterior nares assume a position below the floor of the fossæ; the fossæ becomes narrower, and the turbinateds develop.



Lastly, gentlemen, as a sort of *liqueur* to your feast, if I may presume to call it so, and as a corner-stone to my contentions, I will read you a few lines from this work, giving you the results of Ziem's experiments of artificially blocking one nostril in young animals. This will dispel, I feel sure, the last glimmer of doubt from your minds, if doubt there still exists, of the efficiency of this great cause that I am afraid I have but too feebly contended for.

"Ziem has proved that every obstruction of the nose exerts widely-spread consequences on the development of the skull in young animals, "one of whose nostrils he completely closed up for a long time. There "was seen a deviation of the inter-maxillary bone and the sagittal suture to "wards the shut up side; also lesser length of the nasal bone, of the frontal "bone, and of the horizontal plate of the palate bone; less steep elevations of the alveolar processes; smaller distance between the anterior "surface of the bony auditory capsule and the alveolar process; also "between the zygomatic arch and supra-orbital border; and smaller size

"and symmetrical position of the vascular and nerve canals on the closed side of the nose.

"The distance of the two orbits from the middle line was unequal, which, as has been observed in men, leads to asthenopia, astigmatism, and strabismus."

Gentlemen, my task is done. I have been honoured above measure by your patient hearing. I, with you, want light. I did not come here to please myself or you; I came before you to give birth to Truth. If, then, that be Truth, I fear not what may follow. The cold steel of your adverse tongues cannot wound me. But if not, I beg you—nay, I pray you—rend my Idol in pieces, and cast my contentions to the four winds of heaven, and I will bless you.

The PRESIDENT requested members to keep to the subject of the paper, which treated only of the etiology.

Dr. GRANT complimented the author upon the theory which he set to work to elucidate. He expected from the title of the paper that he intended to deal with deviations of the septum in the wider sense, and include the spurs, etc., of which he saw so much more than of mere deflections of the septum, of which there was really very little to say. He agreed that closure of one nostril was certain to cause an in-suction on that side. As an illustration of the thinness of the septum he referred to the ease with which the septum was perforated, as sometimes took place during the specific fevers. Of the soft and yielding nature of the septum in early life nobody could have any doubt. He pointed out that, in addition to the negative pressure in the closed nostril, there was a positive pressure on the roof of the mouth which might well bring about an arching of the palate and consequent increase of deflection of the septum. He concurred also in the view as to the frequency of traumatism as a cause. He thought there was often something more than the atmospheric pressure necessary to determine which side of the nose should be blocked, and that something might be traumatism. He did not think they were in possession of such direct evidence in respect of the influence of paralysis of the nasal muscles on one side in producing deformities of that side, but it was possible the evidence would be forthcoming. The question of negative pressure was a vital one, and explained a great many points in relation to nasal swellings and disturbances. Many experiments had been published to show the action of negative atmospheric pressure on the nose. Macdonald had repeated with great effect the experiments of Bloch and Aschenbrandt. The question became a very much larger one when they went into the subject of the outgrowths from the nasal septum. He thought in the examination of septums for statistical purposes some of these forms of deviation were also included. (Mr. COLLIER: Certainly, other forms of irregularities.) That of course reduced the frequency of deflection of the septum, pure and simple, to very much less than Mr. Collier's figures seemed to make out. He had a strong feeling that some other mechanical force was present to start the process—traumatism or sleeping on one side, or even blowing the nose always with the same hand.

Mr. WINGRAVE asked how traumatism could possibly be a factor otherwise than by interfering with the movements of the nasal muscles, and even these were paralysed, how this could interfere with the entrance of air on that side. He had often noticed that one naris was motionless, while the other was moving, without apparently interfering with respiration. He could conceive that a blow might interfere with the turbinated bones or the cartilages, and so determine a lesion. A good deal was said about it in the text-books, but he had serious doubts whether it was a factor to be considered. With regard to the pressure of air during inspiration, he pointed out that the ordinary tidal air was drawn in with very little force, with a maximum pressure of certainly not more than from five to six millimetres of mercury, so that he was unable to understand how Mr. Collier got at his figures. He pointed out that in deglutition there must be a negative pressure in the posterior nares, and this must be considered too if the theory were correct.

Mr. Collier had alluded to traumatism as a factor in early life, but as a matter of fact one met with but little at that period. The parts were soft previous to puberty, yet he could not understand how they could get deflections after puberty and not before if traumatism were to be considered a cause. With reference to the thinnest part of the septum giving way, he pointed out that in drilling, one often found that the septum was very thick just where the deviations had taken place. He suggested that the development of the pre-maxillary bone might not be without some effect in production of the deformity in early life.

Dr. WARDEN said his views so entirely coincided with those of the speaker that to repeat them would be tautology. He said he had examined a large number of noses in his time and had come to the conclusion that a perfectly symmetrical septum was very rare, in fact he had never seen such a one. He confirmed the views as to the hereditary influence. As the external shape of the nose was markedly hereditary, so, doubtless, was the shape of the septum. He mentioned that in his own family his wife's father had the nose slightly on one side, and so had his own father, both curiously enough on the same side. This tendency had manifested itself in his daughter, whose nose was much to one side. The congenital cases were very common, and if looked for would probably be found to be even more so than was suspected. He would not put syphilitic cases in the next rank, though they knew that syphilitic diseases were very likely to produce deformity, but that would only be in special cases. He had come across a vast number of cases of rickets, and he had invariably found the deformity to exist, and he had been surprised and struck with the invariable repetition of this condition. With regard to blowing the nose with the same hand he could understand how it acted in children. He called attention to the fact that in addition the child usually wiped the nose from below upwards, which in the long run would certainly affect the shape of the nose, causing a supple *nez retroussé*. He had observed that the nurse usually put a child on one side in the cradle—usually the same side, and he had remarked a flattening of the head on that side. He pointed out that astringents, if used, would probably be used on both sides. He said that everyone

who had experience of midwifery must have noticed how frequently the nose was deflected during labour, and it required no great stretch of imagination to suppose that the septum would thereby be deflected. He pointed out that savages were much more exposed to traumatisms, and doubtless suffered in consequence. He had frequently asked the question as to whether there had not been received a blow on the nose during youth, and such had usually been the case. With regard to the influence of the nasal muscles, that might be a cause, but he had his doubts, and in any event it could not be considered to be proved.

Mr. HOVELL said he was much indebted to the author for his explanation of the causes of deflection of the nasal septum, and he thought the views expressed were in the main correct. There was, however, one form not uncommonly met with, concerning the cause of which he would like to have Mr. Collier's opinion. He referred to cases in which there was some deflection at the upper part, while at the lower part the septum was bent laterally at an acute angle, and might project into one nostril in a V shape for a quarter of an inch or more. He asked whether Mr. Collier has specially noticed these cases.

Mr. COLLIER, in reply, said he really felt very gratified at the unanimous approval and acceptance of his new-born explanation of the existence of nasal deflections. He explained that, from the fact that to his mind the causation of deflections was so completely different from the causation of spurs, ridges, and exostoses, it was impossible to deal with them in one and the same paper.

In answer to Mr. Hovell, Mr. Collier said he thought that the state of septum indicated by him might well be attributed to a bulging due to atmospheric causes in the first place, and subsequently exaggerated by the growth of the septum.

In answer to Mr. Wingrave, Mr. Collier explained that his contention that slight blows on the nose become a fertile source of deflections was quite consistent with the fact that deflections were extremely rare before the age of seven. Children, as he had pointed out and illustrated by diagrams, were not so liable to blockings of the nostril owing to the greater width of the bony anterior nares and nasal fossæ. As the child approached the age of puberty, slight blows were then sufficient to completely block the nose. This was well illustrated by a relative of his, aged ten, who had recently got complete stoppage of one nostril from a fall on the nose, hardly sufficiently to attract attention for more than an hour or so. It was between the ages of ten and sixteen that slight blows, causing bruising of nose and muscles, were most potent for blocking the nostril.

In answer to Mr. Wingrave's doubts as to the efficiency of the dilators of the nostril to keep the nose open, Mr. Collier mentioned the complete collapse of the nostril during narcosis, hemiplegia, and paralysis due to lesions of the facial nerve. No anæsthetist relied upon the nose for ventilating the lungs during anæsthesia. It was always requisite to open the mouth and bring forward the tongue.

In one of Mr. Collier's patients, with paralysis due to pressure on the facial nerve, there was complete collapse of that side of the nose.

The efficiency of the dilators of the nose was greater in the lower animals. This was well illustrated in the horse when returning from a sharp run or race.

In explanation of the fact that a great increase of thickness was often present in the bent portion of the septum, Mr. Collier, in answer, drew Mr. Wingrave's attention to a similar state of things in the bent tibia, femur or radius, and attributed it to Nature's effort to strengthen the bend, or perhaps to the release of pressure on the convex side leading to hyperæmia and overgrowth.

The Annual Dinner of the Association was held on November 27th, 1891, at the Langham Hotel, Portland Place, the President, Mr. LENNOX BROWNE, in the Chair. Among those present as guests of Fellows of the Association were:—Mr. NUNN, Dr. MAPOTHER, Mr. HERMANN VEZIN, Dr. SYMONS ECCLES, Dr. JOLL, Dr. PHINEAS ABRAHAM, Dr. BECK, Dr. CAGNEY, Surgeon-General O'LEARY, Mr. REBMAN, Mr. HILL, Mr. TINDALL.

The loyal toasts were duly honoured. Success to the Association was proposed by Mr. NUNN, and in returning thanks the Hon. Secretary stated that the Association had now over eighty Fellows; that twenty-three meetings of the Council, and ten general meetings, had been held, and that at the latter forty-three papers had been read and sixty patients exhibited. The after-dinner proceedings were further enlivened by recitations and songs from Mr. HERMANN VEZIN, Mr. MILES, and Dr. DUNDAS GRANT.

ABSTRACTS.

Hope.—*A Laryngeal Cotton Applicator.* "New York Med. Journ.," Sept. 12, 1891. THIS is very similar to those commonly in use, except that a bell-shaped cap is screwed down on the cotton to make the pellet secure.

B. J. Baron.

Weagly (Marion, Pa.)—*A Self-Retaining Palate Retractor.* "Med. News," Sept. 5, 1891.

THIS is a modification of White's instrument, and is said to keep in position better; at the same time it is more comfortable, and does not irritate the palate, etc., so much.

B. J. Baron.

Pictet (Berlin).—*Crystallization and Purification of Chloroform.* "Lancet," Nov. 21, 1891.

PROFESSOR PICTET has by means of very low temperature succeeded in freezing chloroform, and separating various constituents by crystallization. The chloroform thus prepared is said to be of a degree of purity unattainable by any other means. It seems quite probable that variable and occasionally distressing effects of ordinary chloroform may be due to the presence of impurities, thus removable, and clinical results of Pictet's chloroform will be anxiously and expectantly watched. [We understand that it has been prepared commercially.]

Dundas Grant.

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Chavernac (Aix).—*Naphthalin in Whooping-Cough.* "Lancet, Nov. 21, 1891.

ACCIDENTAL exposure to fumes containing naphthalin having diminished the frequency and severity of the paroxysms, in the case of his son, Dr. Chavernac effected improvement and rapid cure in his own and other cases by burning it in the bedroom each night. Three-quarters of an ounce is placed in a metal dish surrounded by hot coals. Out of many people exposed to the fumes, two only found them very irritating, and, on examination, these persons were found to be suffering—unknown to themselves—from incipient phthisis. From this it is concluded that naphthalin fumigation is contra-indicated for phthical patients, and further that it may afford a means of diagnosis in doubtful cases.

Dundas Grant.

Bishop, Seth S. (Chicago).—*Camphor Menthol in Catarrhal Diseases.* "Med. Rec.," Oct. 31, 1891.

THE presence of the camphor appears to intensify the action of the menthol and to give greater relief in hay fever than the inhalation of menthol alone. It seems to reduce turgescence and tumefaction of the turbinated bodies so much as often to render contemplated operation for stenosis unnecessary. In constriction of Eustachian tubes Bishop injects a 10 per cent. solution in lanoline, following this up by inflation of a 5 to 10 per cent. spray in hypertrophic tympanic catarrh. In laryngitis, with loss of voice, he gives inhalations varying from 5 to 20 per cent. For sensitive hay-fever patients, he uses inhalations of from 3 to 5 per cent., and for less sensitive individuals with hypertrophic catarrh, etc., 10 per cent. To reduce great swelling of the turbinates and relieve stenosis 20 to 25 per cent. of camphor menthol is required. The full strength relieves itching and reduces redness and swelling in eczematous and herpetic eruptions. [We suppose that in all cases the solution for spray inhalation is made with lanoline, but assume that any of our ordinary spraying oils may be used if more convenient.]

Dundas Grant.

Moos (Heidelberg).—*Histological and Bacterial Investigation of Middle-Ear Disease in the various Types of Diphtheria.* "Arch. of Otol.," Vol. XX., No. 1, 1891; "Lancet," Nov. 21, 1891.

IN the mucous membrane there is a partial modification of the epithelium and an extensive infiltration of the mucosa, with polymorphous migratory cells and retrograde metamorphosis, and, finally, a necrosis of the blood-vessels and bone. There is seldom any suppuration, as the disease is essentially mycotic in its nature. It is interesting to note that he finds peculiar hyaline and granular degeneration in the intrinsic muscles and similar changes in the nerves of the middle ear. Etiologically, scarlatinal diphtheria differs from primary diphtheria in not showing the Klebs-Loeffler bacillus. On the other hand, pharyngeal diphtheria and laryngeal croup are identical, both depending upon that bacillus. In all the cases the bacteria setting up inflammation in the middle ear differed from those found in the throat, and were more like the streptococcus of erysipelas or that of scarlatina.

Dundas Grant.

Washburn (Milwaukee). *The Causes and Prevention of Diphtheria in Cities.*
"Med. News," Sept. 5, 1891.

AFTER quoting a good deal of literature dealing with this subject, the author goes on to state the various predisposing factors in the causation of the disease, viz., dampness from bad drainage, decaying refuse, bad ventilation, and impure water. To limit the spread, isolation must be for a considerable time, and he quotes the decision of the Paris Congress of Hygiene, that a child ought not to be allowed to return to school after an attack until forty days from its commencement. He advises a gargle of creolin solution for the attendants on a patient. In the event of death taking place, the body should be wrapped in a sheet soaked in 1 to 3000 solution of hydrochlorate, and the funeral ought to be private. He relies mainly on *pure air* for disinfecting the room, combined with fumigation by burnt sulphur. Boiling the clothes and bedding, or soaking them for four or five hours in a 1 to 2000 solution of hydrochlorate, is effectual.

B. J. Baron.

Carpenter, Alfred.—*Diphtheria.* "Brit. Med. Journ.," Sept. 19, 1891.

THE author introduced a discussion on this subject in the Section of Public Medicine, at the Annual Meeting of the British Medical Association, 1891.

It was observed that the carrying out of correct principles of hygiene, which had had such important results in other diseases, had failed in the case of diphtheria. In Dr. Carpenter's experience the disease had greatly increased during the last twenty-five years, not only in rural, but also in urban districts. It was shown that, in some instances, after repeated reappearances at intervals of two, three, and four years in the same cottages in which the owner did everything that was supposed to be necessary, the disease was not eradicated until the cesspools were cleared away, and the basements of the houses completely dried and rendered damp proof. He believed there was sufficient evidence to show that diphtheria was dependent upon a disease germ from a previous case. The introduction of disease germs from imported cases into towns was followed by their rapid multiplication in badly constructed sewers in which sewage deposits had collected.

Dr. Carpenter believed it would be possible to stamp out diphtheria by seeing that the basements of houses were rendered damp proof, by the prohibition and destruction of cesspools, by taking care that on washing days hot water be conveyed in such a way as not to give out steam infected by human excreta, and by re-laying defective drains in solid concrete. An intercepting trap between the house and the main drain was very objectionable.

Dr. BUTTERFIELD had formed the opinion that the disease was rarely connected with sewers, but seemed to be influenced by (1) accumulations of manure and other filth, (2) dampness of house, and (3) personal infection. The disease seemed to exist in some districts in a latent form as simple sore-throat, which became developed into true diphtheria by favouring circumstances.

Dr. PARSONS pointed out that outbreaks of diphtheria were often

preceded by cases which, though not so called and not presenting the clinical features of the disease, were potentially of the same nature.

Surgeon-General MOORE observed that his experience did not lead him to connect diphtheria with sewers and drains.

Surgeon-Major PRINGLE mentioned the case of a girl aged nine years who, two weeks after apparent complete recovery, had coughed up a piece of membrane. If this girl had been at school, which might easily have been the case, she would undoubtedly have been a source of infection.

Dr. GROVES had found that the geological nature of the country had to do with the spread of diphtheria, and with this Dr. Comyns Leach concurred. The latter mentioned that two epidemics of the disease which had occurred in a country district in Dorset had occurred on clay soils.

Hunter Mackenzie.

Parisot (Voges).—*Treatment of Diphtheria by Irrigation with Salicylic Acid.*

"Bull. Gen. de Therapeut.," Sept. 15, 1891; "Lancet," Nov. 21, 1891.

SINCE using this method Dr. Parisot's mortality has diminished from ten out of fourteen to five out of twenty-four. His formula is:—Salicylic acid one gramme (gr. xv.), dissolve in twenty grammes (fʒ v.) of (90 per 100) alcohol, add 980 grammes (fʒ xxxv.) of water. This is placed in a tin douche-reservoir hung on the wall. An india-rubber tube, with pointed glass tip and spring clip, is used for the direction of the stream into the back of the throat, while the child's head is held forwards and a little downwards. As a rule, three or four ounces are required each time, in order to detach the membranes. This should be done frequently. The reproduction of the membrane becomes slower and less complete. By experiment on detached membrane it was proved that very rapid solution took place in salicylic acid. [See Manning on the *Treatment of Ulcerated Scarlet Fever and Diphtheritic Throats by Irrigation*—with boracic acid solution—in JOURNAL OF LARYNGOLOGY, June, 1891, p. 232.]

Dundas Grant.

Seibert (New York).—*Further Report on Sub-Membranous Local Treatment of Pharyngeal Diphtheria.* "Medical News," Sept. 26, 1891.

THE author has collected, in all, eighty-five cases of diphtheria that have been treated by his method of sub-membranous injection of fifteen drops of hydrochloride for a dose, with the result that death ensued in six cases only, and paralysis in none. [This method is novel, and apparently very successful, and certainly deserves a full trial at our hands.—*Rep.*]

B. J. Baron.

Turner, A. M. Sydney (Gloucester).—*Paraffin in Diphtheria.* "Brit. Med. Journ.," Sept. 19, 1891.

THE author scrapes off the membrane and applies ordinary paraffin to the inside of the throat every hour with a large camel's hair brush. Its use is continued less frequently for two or three days after improvement has set in. Paraffin appears to lose its efficacy for this purpose if allowed to stand exposed to the air. A generous diet, with iron, was usually part of the treatment.

Hunter Mackenzie.

Rideal, Samuel (London).—*Paraffin in Diphtheria*. "Brit. Med. Journ.," Sept. 26, 1891.

REFERRING to Mr. Sydney Turner's communication (*vide supra*), the author says that this would lead us to hope that the paraffin hydrocarbons have a definite action in diphtheria. He expresses a difficulty, however, in understanding why the curative properties of the paraffin should be lost on exposure to the air, as it does not contain any appreciable quantity of hydrocarbons volatile at the ordinary temperature. The liquid condition of the paraffin appears an objection to its use; this might be overcome by converting it into a semi-solid substance, as by agitating it with a soap or saponin. A suitable way to do would be to agitate with an egg-whisk a mixture of paraffin and 10 per cent. of warm water containing 1 per cent of ground saponaria bark—this would adhere better to the surface of the membrane. The liquid vaseline of the *German Pharmacopœia* might also be used in place of ordinary paraffin, and would doubtless produce similar beneficial results. The vaporization of paraffin, or the formation of a spray of this liquid, is also recommended as an alternative method of applying it.

Hunter Mackenzie.

Moorhead, J.—*Lupus of the Nose*. "Brit. Med. Journ.," Oct. 10, 1891.

THE author, in a decision on lupus at the Annual Meeting of the British Medical Association, 1891, mentioned a case of the ala nasi, in which treatment by a concentrated solution of caustic potash completely removed the morbid growth, while cod-liver oil and other general remedies so improved the general health that the local disease did not recur.

Hunter Mackenzie.

Newcomb.—*Two Cases of Membranous Rhinitis*. "New York Med. Journ.," Sept. 12, 1891.

BOTH these cases were young children, and in both the nasal trouble followed on an attack of measles. On removing the membrane from the turbinated bodies and septum free bleeding ensued. A lotion of boracic acid was ordered. The general condition soon became better under tonics, the nose ceased to develop the membrane, and in little over a week the patients were well. Microscopically, the membrane consisted of fibrin entangling a few epithelial and pus cells, with here and there scanty rod-shaped and spherical bacteria. The author thinks that it is possible that a pathogenic germ stands in causal relationship to the affection. Also the fact that a bleeding surface is left after removal of the membrane does not, he considers, show that it is diphtheritic. Local mechanical disturbances in the circulation leading to the impairment of the integrity of the superficial epithelium will produce a false membrane which is not in any way, short of bacterial cultures, to be distinguished from a true diphtheritic exudate.

B. J. Baron.

Payson Clark. *Sarcoma of the Nose; with Report of Case*. "Boston Med. and Surg. Journ.," Sept. 3, 1891.

THE case is that of a coloured man, aged thirty-five years, and the growth, which was a round-cell sarcoma, repeatedly and rapidly recurred after removal. A good many statistics are quoted, from which it appears that almost two-thirds of the cases of sarcoma occur under forty-five years of

age. It occurs, therefore, in younger people than carcinoma. The appearance of the growth is said to be characteristic, viz., bluish-grey colour, of flaccid consistency, and it bleeds very readily. The author prefers the cold wire snare for operating.

In the discussion that followed, Dr. Cheever said that he prefers Ollier's operation for the higher growths, as the antrum, the pharynx, the higher parts of the nasal cavity, and the turbinated and ethmoid bones are thereby reached. He does not think that cauterization has a tendency to provoke renewed growth in these tumours.

B. J. Baron.

Hubbard. *Epistaxis.* "The Toledo Med. and Surg. Reporter," Sept., 1891.

THE author discusses the causes of epistaxis, and particularly alludes to the serious effects of nose bleeding in people who suffer from chronic Bright's disease. He considers it to be a safety-valve in some forms of plethora, the congestive stage of acute pneumonia, and in cerebral thrombosis. By far the greater number of nasal hæmorrhages are caused by rupture or erosion of a small artery on the anterior half of the septum and in the lower, middle, or superior meatus. Very hot or very cold water, with a little salt added to it, is often efficacious in stopping the bleeding. If we decide to cauterize the bleeding point, spray the nostril with a little four per cent. solution of cocaine. After a temporary vaso-motor effect we can see a small pink point appear where the vessel has given way. This is to be carefully cauterized with chromic acid, and a powder, composed of equal parts of antipyrin, oxide of zinc, and hydrastis, to be insufflated; also ergot, morphia, and acetanilide are adjuvants of value. The author protests against the use of chemical styptics and blindly packing the nostrils with plugs of lint.

B. J. Baron.

Lake, R (Barnes).—*Black Tongue.* "Brit. Med. Journ.," Oct. 31, 1891.

THIS affection gave rise to no symptoms, and was entirely cured in ten days under the local application of boric and carbolic acids.

Hunter Mackenzie.

McShane.—*Fish Bone Embedded in Base of Tongue.* "New Orleans Med. and Surg. Journ.," Oct., 1891.

THIS was removed with Fraenkel's forceps.

B. J. Baron.

Walker (Peterborough).—*Case of Severe Ptyalism following use of Lotio. Hydrarg. Nigra.* "Brit. Med. Journ.," Oct. 10, 1891; Notes of a Case read before the South Midland Branch, Brit. Med. Assoc., Oct. 6, 1891.

Hunter Mackenzie.

McShane. *Pin Embedded in Posterior Wall of Pharynx.* "New Orleans Med. and Surg. Journ.," Aug., 1891.

THE pin was removed by Jurasz's forceps after cocainization, and no bad effects followed.

B. J. Baron.

Hawkins-Ambler, G. A. (Clifton).—*Retro-Pharyngeal Abscess.* "Brit. Med. Journ.," Sept. 19, 1891.

THE author narrates a case and says he "made an incision along the posterior border of the sterno-mastoid, and dissected carefully down till

"the fascia covering the transverse processes of the cervical vertebrae was reached; coasting round to the back of the pharynx it was an easy matter to push through the wall of the abscess, evacuate about an ounce and a half of thick, sweet pus, and flush the cavity with iodine water and insert a drainage tube. There was no bleeding point requiring ligatures, and only one small nerve was seen and divided." The wound closed in about a week, but a few weeks later the swelling returned, and was aspirated. In a few days afterwards the old operation wound re-discharged, and the patient is now reported to be in good health. The author speaks for the safety and utility of this method of operating.

Hunter Mackenzie.

Coats, Joseph (Glasgow).—*The Spontaneous Healing of Tuberculosis; its Frequency and the Mode of its Occurrence.* "Brit. Med. Journ.," Oct. 31, 1891.

A PRESIDENTIAL address delivered to the Medico-Chirurgical Society of Glasgow, 2nd October, 1891. After a careful survey of various points in the natural history of tuberculosis, the author says: "My belief, as the result of considerable observation, is that a tuberculosis of the lungs, sometimes of inconsiderable extent, will often extend to the larynx perhaps there also of little consequence for a time. The disease may be recovered from in the lung while it lingers on in the larynx. After a long course in the larynx, as long sometimes as four or five years, a re-infection of the lung may take place. This will occur when the laryngeal lesion becomes extensively ulcerated. The discharges from such ulcers are highly infective, they are loaded with bacilli. In the processes of respiration little fragments of mucus are liable to be carried in and planted in the finer bronchi. In consequence there is a sudden burst of acute tuberculosis to which the patient probably succumbs." He then records an illustrative case, and adds, "The practical inference from this class of cases is that, after a pulmonary attack, even if of a slight nature, a remaining laryngeal disturbance should not be regarded as of trivial importance. Ulceration occurring in the trachea and bronch may produce a somewhat similar re-infection of the lungs."

Hunter Mackenzie.

Mackenzie, Hector (London).—*Tuberculous Larynx in a Case of Myxœdema.* "Brit. Med. Journ.," Oct. 24, 1891. Path. Soc. of Lond., Oct. 20, 1891.

THE interest of this case, that of a woman, aged thirty-eight, from whom the specimen exhibited was taken, was two-fold: First, in the absence of œdema, either fluid or solid, and, secondly, in the association of the disease with tuberculosis. This association was not new, for out of seventy-five cases reported on by the Committee of the Clinical Society, a family history of phthisis was found in twenty, and out of fifteen cases, on which the pathological portion of the report was founded, tubercle was present in at least three. It has been affirmed that tubercle was almost unknown amongst goitrous individuals, and, if so, the presence of tubercle in the subjects of myxœdema was especially interesting.

Hunter Mackenzie.

Robertson, William (Newcastle-on-Tyne).—(1) *Case of Tracheotomy for Laryngeal Phthisis.* (2) *Case of Laryngo-Pharyngeal Stenosis, probably Syphilitic.*

"Brit. Med. Journ.," Oct. 17, 1891. Exhibition of Cases before the Northumberland Medical Society, Oct. 8, 1891.

GREAT improvements had followed in the first case. In the second, tracheotomy was performed, and dilatation by bougies was now being tried.
Hunter Mackenzie.

Tymowski.—*Resorcin in Laryngeal Phthisis.* "Monats. ; für Ohrenheilk."

"Lancet," Nov. 21, 1891.

IN unhealthy-looking ulcers, which are undoubtedly of tuberculous character, a 100 per cent. solution of resorcin may be applied with reliance. Inhalations of two to five per cent. of resorcin may be substituted for those of cocaine. Resorcin is antipyretic, antiseptic, and hæmostatic. It causes no pain, and need only be applied once a day. [Quite an ideal mode of treatment if confirmed.]
Dundas Grant.

Mackenzie, Hector (London).—*Ulceration of Larynx in Typhoid Fever.* "Brit. Med. Journ.," Oct. 24, 1891. A Card specimen exhibited to the Path. Soc. of Lond., Oct. 20, 1891.

Hunter Mackenzie.

Westcott, W. Wynn (London).—A Coroner's Notes on Sudden Deaths. "Brit. Med. Journ.," Oct. 17, 1891.

IN 303 cases of sudden death, twenty-nine were due to asphyxia. Of these, one man died suffocated in a very sudden acute attack of œdema of the glottis from laryngeal catarrh, four died suffocated during the spasms of asthma, three were gradually suffocated during the fogs. The man who died of œdema of the larynx was an epileptic, as were also two of those who died in the fogs. One-third of the sudden deaths occurring in London were due to alcohol.
Hunter Mackenzie.

Robertson, William (Newcastle-on-Tyne).—*Posticus Paralysis in Infants.*

"Brit. Med. Journ.," Oct. 17, 1891. Paper read (but not reported in full), Northumberland Medical Society, Oct. 8, 1891.

THE author has written an interesting paper on this subject, which appeared in the October number of this Journal.
Hunter Mackenzie.

Editors of the Lancet.—*Roaring in Horses.* "Lancet," Nov. 21, 1891.

THE hereditary character of this vice—or disease having this symptom—is dwelt on, and the necessity for keeping "roarers"—no matter how magnificent in other respects—away from the stud emphatically asserted. As a rule, the disease is a left-sided laryngeal hemiplegia, the dilator muscle undergoing degeneration from impaired nervous influence. How the left recurrent laryngeal in these cases becomes impaired is not fully made out.
Dundas Grant.

Wessinger.—*A Case of Foreign Body in the Air-Passages.* "New York Med. Journ.," Sept. 12, 1891.

THIS is the case of a patient who insufflated a tack into his left bronchus, where it lodged about an inch below the bifurcation. In a fit of coughing,

to which the patient was very subject, he expectorated the tack, which had lain in the bronchus fifteen months. As regards treatment : tracheotomy may be necessary immediately after the accident has happened, or inversion and shaking may be successful. We may pursue a conservative course, and wait ; but, if we determine on surgical measures, delay is dangerous.

B. J. Baron.

Murray, G. R. (Newcastle-on-Tyne).—*Note on the Treatment of Myxædema by Hypodermic Injections of an Extract of the Thyroid Gland of a Sheep.* "Brit. Med. Journ.," Oct. 10, 1891.

THE author records a case (shown at the October meeting of the Northumberland and Durham Medical Society) in which marked improvement followed on treatment by injection. He gives details of the method of preparing the extract, and expresses the hope that others may be induced to give the treatment a fair trial in myxædema.

Hunter Mackenzie.

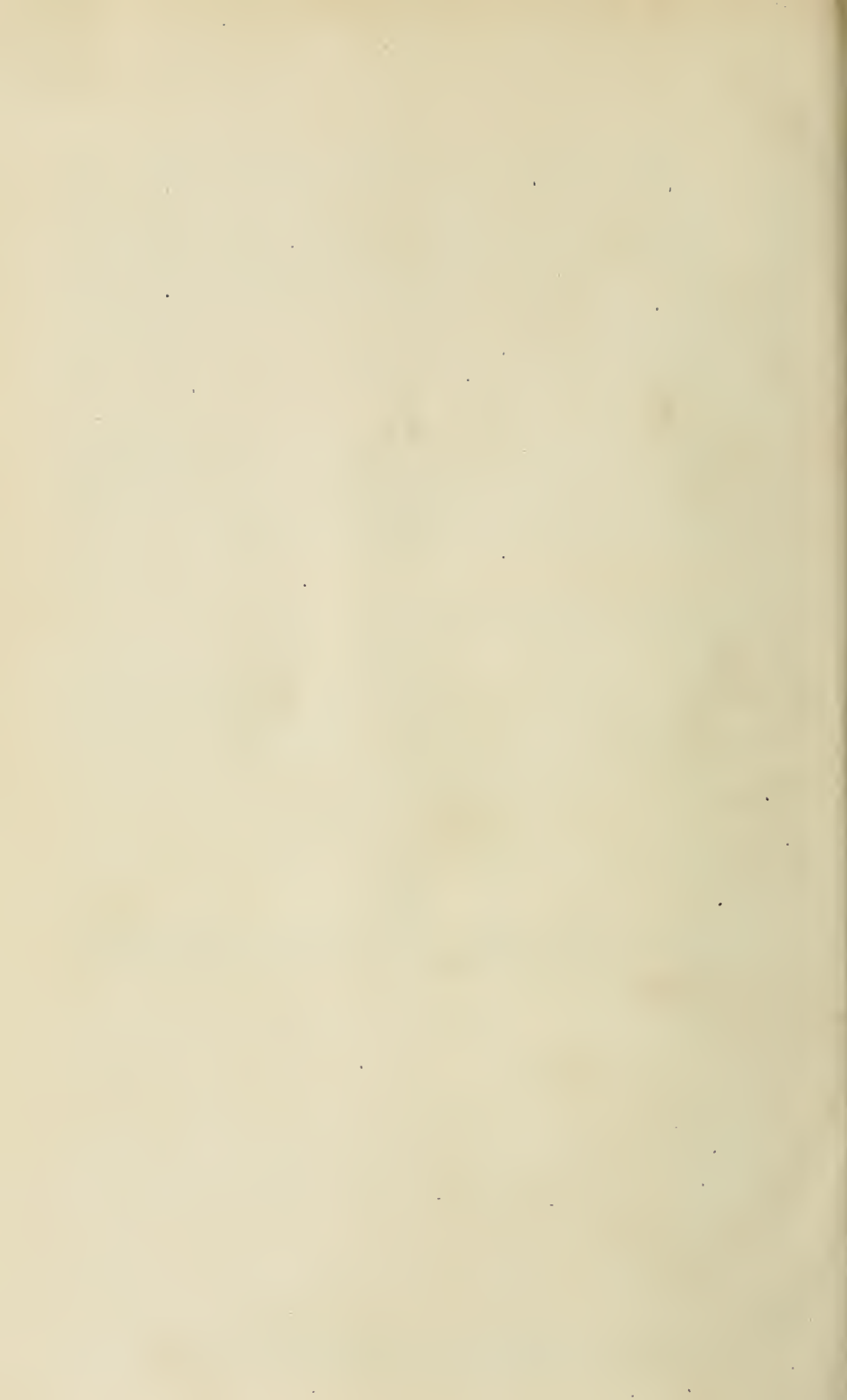
Fenwick, E. Hurry (London).—*The Diuretic Action of Fresh Thyroid Juice.* "Brit. Med. Journ.," Oct. 10, 1891.

THE author is of opinion that myxædema really "depends upon a perverted renal function. We find that the thyroid juice possesses a distinct "diuretic action in diseases of the kidney, though apparently it is negative "in healthy persons." After injection of thyroid juice the urine increases in quantity, and this effect has been noted in a case of myxædema to continue for fourteen to twenty-one days.

Hunter Mackenzie.

NOTE.

WITH the number for January, 1892, will commence the incorporation with the other matter in this Journal of a section on OTOTOLOGY, edited by Dr. DUNDAS GRANT.



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